Chapter 4

Tasmanian High School Survey Data

Introduction

In November 2002, researchers in the Faculty of Education of the University of Tasmania conducted a survey of Year 10 Mathematics and non-Mathematics teachers and students in Tasmania to collect data for a study entitled *School Governance, Instructional Practices, and Student Outcomes in Tasmanian Schools*. At that time, this research into teacher evaluation and professional development was in its early stages, and the School Governance Survey provided an opportunity to administer questions to high schools on a state wide basis as well as access other data that would contribute to an overview of Tasmanian teacher practices.

The questions initially developed for evaluation focussed on the extent of teacher participation, either as subject or evaluator, and their perceptions of the process in their school. Professional development questions examined motivation and teacher responses to school professional development practices. Because the School Governance Survey was owned by more senior researchers with other objectives, and because of space constraints generated by extensive questions on Mathematics teaching practices in particular, not all of the questions submitted for this study could be included in the instruments, and a number were amended and consolidated (Appendix 1). Furthermore, questions on evaluation were submitted only to the non-Mathematics teacher sample, and the professional development questions in the two teacher instruments differed. Because of this variation, and to ensure consistency of results, only the 193 non-Mathematics teacher responses have been used in this analysis. However, it was judged unlikely that this distinction would affect the sample as this topic sought responses of teachers as professionals rather than subject-based practitioners. The non-Mathematics survey instrument is at Appendix 2.

The initial concept of the School Governance Survey was to include this junior researcher and utilise some acknowledged evaluation and professional development findings into the governance study. The interaction with my supervisor in this process was valuable in advice on the framing of more effective survey questions, and the associated discussion on the topic also yielded inclusion of questions on classroom observation (Questions C2.6 and C2.7) that were not within my initial question list. However, the sudden departure of my supervisor overseas affected the progress, and rendered impractical the continuation of my research relationship with, the governance study. Whilst I retained access to the governance survey data, allowing

me to probe deeper than initially expected into the impact of school leadership on this topic and teacher perceptions about their own professional community, the analysis, tables, and consequent judgements in this paper nonetheless remain unique to this particular study.

Despite the promulgation in 2002 of standards for Science teachers by the Australian Science Teachers Association (ASTA), and for Mathematics teachers in the same year by the Australian Association of Mathematics Teachers (AAMT), there was no evidence at the time of the survey or after that the application of these standards had spread significantly (Ingvarson 2002, p.16). Meanwhile, Kleinhenz, Ingvarson, and Chadbourne had just concluded that Australia remained a *tabula rasa* in the area of evaluation (Kleinhenz et al. 2002, p.3). Rather than frame questions that might achieve almost no response, or else be misunderstood in the absence of a culture of reflective evaluation, this research judged that it might be more profitable to examine the extent of, and responses to, evaluation of teachers by their supervisors. This process, commonly known as *appraisal* or *performance review* had been the subject of literature in the 1980's as part of teacher accountability discussions. It was considered that, if such appraisal remained in place and effective, then it might have accustomed teachers to the scrutiny of their work practices, and also have provided a foundation for the development of reflection on teaching practice. In addition, it would reveal that schools were exhibiting an accountability function that could be further explored through case study. Conversely, a very low return would suggest a culture where evaluation and monitoring of pedagogy were intermittent or absent.

The low affirmative response of around 22% to the question on regular evaluation subsequently revealed that there was little formal monitoring by schools of teachers' pedagogy. This was supported by subsequent research by Kleinhenz and Ingvarson that 'Many teacher appraisal schemes have become merely routine, or have quietly faded away' (Kleinhenz & Ingvarson 2004, p.35). Despite the low outcome, the evaluated teachers were examined by sex, age, and employment category to determine if there were any trends. The age analysis, in particular, follows on from stage theory discussion earlier in this work, to identify the levels of evaluation activity at significant career stages. Thereafter, the research moves onto other aspects of the survey to determine if the responding teachers participated in activities, such as regular meetings about teaching practices or mutual classroom observation, that might indicate reflective activities associated with informal evaluations of pedagogy that had not been otherwise detected. Conversely, the absence of open and collegial behaviours might reveal a continuation of professional isolation.

Professional development is an accepted part of the teaching landscape, and it was not anticipated that the statistical analysis would reveal issues about participation, as compared to findings that might emerge from the more detailed case studies. However, participation levels over the previous 18 months were examined by sex, employment category, and age. The professional development responses were then correlated with questions on morale and effectiveness from the Professional Learning Community section of the survey to determine teachers' perceptions of their most worthwhile and satisfying forms of learning. In accordance with the discussion on validation in Chapter 3, responsiveness to individual needs, and follow-up activities were also examined.

The School Governance Survey examination of decision-making asked the question 'Who has the greatest influence on school policy and practices in the following areas in your school?' (Appendix 2, Question A1). The areas listed included school goals and purposes, curriculum planning, teaching methods, school planning, and reporting. The candidates for influence ranged from the principal alone, through senior staff, consultative groups, and down to the individual teacher. The responses to this question were statistically reduced to establish indices of teacher perceptions of influence, and these were matched against both evaluation and professional development responses to gauge teacher perceptions of empowerment. The results might indicate whether teachers saw themselves as independent professionals, and also corroborate the organisational research used in this study. If teachers were suspicious of the formal level, as argued by Pusey (1976), this would have significant outcomes for any evaluation based on a hierarchical approach. Furthermore, if teachers had low levels of individual influence, they may not respond readily to a call for independent reflective evaluation, but rather adhere to familiar and secure collective groupings, such as industrial unions, or their particular school sectors.

Overall, the image from the survey was one of teachers remaining isolated, with few undergoing evaluation in any form and, whilst participating in professional development, apparently not doing so within an active reflective environment. This is not to suggest, however, that positive learning activity was not occurring, or that teachers were not working to the best of their abilities to support students within what are essentially supportive schools. Rather, it suggested that teachers might not yet be attuned to, or progressing towards, a professional condition of truly reflective pedagogy.

Evaluation Practices

Table 1: Frequency of Evaluation

Extent to which you agree or disagree – 'I am evaluated on a regular basis by my supervisors'	N	Frequency
strongly disagree	60	34.3%
disagree	77	44.0%
agree	37	21.1%
strongly agree	1	.6%
N=175, Missing=18		

Only 21.7% of teachers (n=38) responded that they were evaluated regularly by their superiors (Table 1). The sizeable *strongly disagree* frequency of 34.3% intimates that these teachers may have not experienced evaluation, on even an occasional basis. The combined value of the negative responses means that just over three quarters were not regularly evaluated. If the reasons for evaluations, such as tenure, promotion, inadequate performance, and then teaching practice generally, have to be included into the smaller proportion of participants, then it makes even more unlikely that evaluation is used as an ongoing tool to sustain and develop the quality of teaching.

Table 2: Evaluation by Sex and Employment Categories

		Extent to which you agree or disagree - 'I am evaluated on a regular basis by my supervisors'			
		strongly disagree	disagree	agree	strongly agree
Are you female or male? N-171, Missing=22	female	37.2%	44.2%	18.6%	0%
	male	31.8%	43.5%	24.7%	0%
Are you teaching full or part time? N-171, Missing=22	part time	24.3%	54.1%	21.6%	0%
	full time	37.3%	41.0%	21.6%	0%
Are you on contract or permanent? N-170, Missing=23	contract	30.4%	34.8%	34.8%	0%
	permanent	35.4%	44.9%	19.7%	0%

When evaluation was matched against categories of sex and employment status, there were no *strongly agree* responses, suggesting that these categories alone were not the grounds for evaluation (Table 2). Males had a slightly higher rate of 24.7% as against females at 18.6%. A similar variation occurred in the strong disagreement response with female teachers at 37.2% and males at 31.8%. Although the status of the respondents was not considered within this element of the study, such a differentiation on the basis of sex might reflect performance management of males occupying leadership positions. Nevertheless, the variations do not suggest a significant trend towards evaluation of males, with the agree response being only a few percentage points beyond the overall response rate of 21.7%. In the case of part time and

full time teachers, the level of agreement was equal, although there was variation in the level of disagreement with 37.3% of full time teachers answering in the strong negative, 13% ahead of their part time counterparts. This may suggest some acknowledgement by full time teachers of the absence of monitoring of their work value.

Contract teachers, those who had not yet achieved permanency or else had been employed for specific teaching roles such as longer term absence of incumbents, had an evaluation level of 34.8% as against their permanent counterparts at 19.7%, representing the only examined employment category subject to noticeably higher level of specific evaluation procedures. This could indicate evaluation being used to determine the suitability of teachers for re-employment, or its application within induction processes on the way to permanent employment. Such evaluations might be motivated by administrative rather than pedagogical considerations, and the absence of strong agreement, and roughly equivalent values in both the *disagree* 34.8%, and *strongly disagree* 30.4%, response groups would suggest that this application of evaluation may not be a consistent policy.

Table 3: Evaluation by Age

	Extent to which you agree or disagree - 'I am evaluated on a regular basis by my supervisors'			
How old are you?	strongly disagree	disagree	agree	strongly agree
21-25	46.7%	26.7%	26.7%	
26-30	35.7%	50.0%	14.3%	
31-35	36.4%	45.5%	18.2%	
36-40	27.8%	44.4%	27.8%	
41-45	35.3%	35.3%	29.4%	
46-50	37.8%	45.9%	13.5%	2.7%
51-55	35.7%	42.9%	21.4%	
over 55	13.3%	66.7%	20.0%	

N = 172, Missing=21

Analysed by age, very few teachers expressed strong agreement on being regularly evaluated (Table 3). The highest frequencies of evaluation appear to occur in the 21-25 year group at 26.7%, the 36-40 year group with 27.8%, and the 41-45 year age group with the highest value of 29.4%. Whilst this table does not include information such as age of entry into teaching, these age groupings could correspond to stages of entry, and advancement and promotion, for those undertaking full time careers after graduation. Teachers may thus be reporting use of evaluation as part of induction or tenure processes, as well as a procedural requirement for advancement into more senior teaching positions. Such an explanation would also help explain the 2.7% strong response in the 46-50 year old group, which could represent the application of evaluation as part of regular senior performance management for this solitary respondent. Apart from the over 55 years age group, strong disagreement responses ranged between 27.8% for the

36-40 year olds, up to a high of 46.7% for 21-25 year olds. This suggests that, even where evaluation is occurring, its regularity and objectives may be open to question (Duke & Stiggins 1986, pp.14-15; Stake 1989, p.13; Bednall 1989, p.50). The highest value of strong disagreement is in the 21-25 year range (46.7%) suggesting that early career teachers may be conscious of the lack of some form of formative evaluation process to help them through their initial teaching experience. This strong negative result also suggests that the 26.7% *agree* response in this age group may indeed reflect evaluation as part of administrative procedures, rather than evidence of pedagogical support as part of induction (Ingvarson & Chadbourne 1994, pp.31-32).

The evaluation frequency by age table achieves further relevance if considered from the perspective of stage theory. The first age category corresponds to what Hubermann refers to as *Career Entry* and *Socialization* (Hubermann 1995, pp.196-197). This stage is also described as the *Initial Teaching Period* or *Survival/Adjustment* (Fessler 1995, pp.173-175). Whatever label is applied to this period, new teachers face stresses and concerns about their own adequacy in both teaching and classroom management, as they commence establishing an identity and credibility amongst peers and students. Fessler's description of the career cycle is even more useful in that such an *Induction* phase is followed by a *Competency Building* component where relatively new teachers strive to expand their reservoir of knowledge and skills once they have found the classroom survivable. Most notably, Fessler cautions that: 'Those who flounder during this period (either through lack of ability or lack of support) often experience career frustration or instability' (Fessler 1995, p.185). With so few teachers experiencing evaluation in these critical first years, it would appear that career entry remains "sink or swim", with some consequent loss of capability to schools and the profession (Holly 1989, p.110). There are implications of the strong negative response in the 21-25 year age group, when compared to the professional induction of nurses. As Ramsey noted:

> Unlike nursing, teaching does not have the strength of an organised profession to back its processes for induction and entry into both employment and the profession itself. "Sink or swim" was mentioned often as the process a new teacher had to endure, rather than limiting the load to more manageable proportions which is the case in nursing. For a nurse not to be coping can be a matter of life and death for their patients. For a teacher not coping, the effects on individual students in the short-term are largely hidden, but can have devastating effects on their future in terms of learning and employment prospects (Ramsey 2000, p.116).

The drop in frequency of evaluation to less than 20% over within the next two age categories, from 26 through to 35 years of age, corresponds from a stage theory perspective with those teachers achieving maturity or consolidation in their professional lives (Fessler 1995, 173-174). These may be considered some of the most productive teaching years as established repertoires and relative youth allow spare capacity to expand and develop professional understanding (Hubermann 1995, p.198; Fessler 1995, p.185). If evaluative practices were widespread, then there should be no decrease in evaluation frequency during this period. The reported decrease may reflect established teachers being left to their classrooms after having survived the transition into teaching, and developed sufficient skills and repertoires, the "tricks of the classroom". However, this should not mean that the need for pedagogical review or development has decreased, as classroom survival does not equate necessarily with good teaching. Given that between 26 and 35 years of age a full time teacher potentially will have dealt with ten successive different generations of students, as well as changes to curriculum and teaching methods, a low frequency of formal and recorded interaction between the supervisor and teacher also raises questions of quality assurance and the maintenance of teaching standards. This result accords with the situation that confronted new teachers in New South Wales as described by Ramsey:

> In too many instances educational leaders are failing to establish the structures and processes which will enable new teachers to enjoy success and a sense of professional reward in their early years. In particular, greater attention needs to be given to how schools can use more effectively the expertise which resides with many established teachers about pedagogy and how to manage student behaviour (Ramsey 2000, p.65).

By the time evaluation frequency increases in the 36 to 45 year group, teachers who have come directly from university may have spent 15 years in the classroom. If the levels of evaluation reflect a trend by age groups, then it is unlikely that this age group would suddenly be evaluated for their pedagogy at this career stage. Indeed, the practice of such teachers is more likely to be accepted on the basis of their experience, with evaluator's attention directed to administrative responsibilities that assume greater importance as teachers move into more senior positions (France 1989, p.77). From a stage theory perspective, evaluations in this age range are more likely to be directed at the successful teachers who are moving ahead in their careers. What is less likely to be addressed are the needs of the frustrated and disaffected, those who have reached a plateau in their careers, burned out, or reaped the outcome of previously

unidentified problems (Fessler 1995, p.186; Hubermann 1995, p.200; Scriven 1989, p.101). The reduction in evaluation frequency again after 46 years of age supports this view, as this is the only age bracket where there is a strong agreement response, most probably aligned directly to appraisal of senior management positions. For the vast majority of teachers they are again left alone. If this is the case, there appears to be no attempt to address attitudes of withdrawal or conservatism that can manifest within this age range (Hubermann 1995, pp.201-202; Fessler 1995, p.186).

Stage theory and descriptions of career cycles are not immutable and, undoubtedly, teachers do move in and out of phases in response to environmental stimuli (Fessler 1995 p.187; Hubermann 1995, pp.194-195). However, the issue is not the location of the phases but that, with the frequency of evaluation being so low overall (with the possibility that some may never be evaluated), there is no means by which each individual's needs can be identified and support provided. Also, claims of confidence in the abilities and commitment of the teaching force cannot be substantiated without empirical evidence of either. In this sense, the evaluation processes that are in place appear to meet neither accountability, nor professional development, objectives, leaving their purpose open to question (Ingvarson 1995, p.33; Ingvarson & Chadbourne 1994, pp.38-39; Duke & Stiggins 1986, pp.14-15). Meanwhile, the apparent random nature of the evaluations undermines their validity as a whole (Scriven 1981, p.248; Stake 1989, p.13).

Table 4: Correlation of Evaluation Elements

	I am evaluated on a regular basis by my supervisors'	Evaluation affects my teaching practices in a positive way	Evaluation is not used by my supervisor as a compliance tool	Evaluation in my school is open to staff input	Evaluation in my school is fair and respectful	Evaluation in my school focuses on skills or practices rather than the person
Evaluation affects my teaching practices in a positive way	0.395(**)					
Evaluation is not used by my supervisor as a compliance tool	-0.150	0.116				
Evaluation in my school is open to staff input	0.353(**)	0.467(**)	.000			
Evaluation in my school is fair and respectful	0.388(**)	0.552(**)	0.256(**)	0.586(**)		
Evaluation in my school focuses on skills or practices rather than the person	0.081	0.169(*)	0.368(**)	0.220(**)	0.260(**)	
Evaluation in my school makes me feel like a professional, rather than an employee	0.365(**)	0.589(**)	0.249(**)	0.581(**)	0.661(**)	0.251(**)

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Amongst those who were evaluated, there was a moderate to weak positive correlation of 0.395, significant to the 0.01 level, for evaluation affecting teaching practices in a positive way (Table 4). This suggests that, even if the appraisals referred to in the survey were directed to accountability or promotion purposes, they had a positive effect on teaching practices in a number of cases. Thus, evaluation in any form could enhance pedagogy to some extent by virtue of the need to consider, report, and defend, in the review report or interview. However, such reflection also may be concurrently restricted by other factors, such as suspicion and fear of the judgement by organisational superiors. Regularly evaluated teachers responding that they felt like professionals rather than employees generated a similar moderate value of 0.365 significant to the 0.01 level, suggesting a similar outcome to the impact on teaching practices. This may flow either from examination of particular functions and responsibilities, or simply

the recognition and interest directed at the individual. However, the level may be restricted again by perceptions of ownership and individual concerns at surveillance.

The method of application of the evaluation itself appears to be critical. Consideration of staff input into the evaluation process not only engenders perceptions of the process being fair and respectful, yielding a more positive 0.586 significant to the 0.01 level, but also enhances feelings of professionalism, 0.661 significant to the 0.01 level, representing the highest positive correlation value in this table. Thus teachers experiencing evaluation most likely will feel more positive where the process involves them, is clearly respectful, and openly takes into account teachers' professional input. Similarly, for evaluation not to be perceived as a compliance tool it is important that it manifest respect, with a moderate correlation of 0.256 significant to the 0.01 level, concentrate on the work rather than the individual, 0.368 significant to the 0.01 level, and treat teachers as professionals, a moderate correlation of 0.249 significant to the 0.01 level. That these positive correlation figures are not greater is interesting in that the connection between them would seem to be natural from a professional pedagogical standpoint. The restraint in some of the figures may represent concern on the part of some of those evaluated that the system is already set and perhaps not as friendly as it could be. Alternatively, the appraisals referred to may be of such an administrative orientation that teachers accept a lesser impact on pedagogy, and also acknowledge that the process is owned by their superiors, something that might of itself generate suspicion and concern, regardless of the level of care, respect, and collegiality applied.

Whilst appraisal may affect teaching practices positively by forcing some level of reflection on pedagogy, the lower correlation value of 0.395 suggests that appraisal systems are unlikely to enhance the quality of teaching on a widespread basis. Where an evaluation system is imposed from above, teachers could feel that personality and organisational conformity, rather than teaching, is the focus of the process. This is reflected in a weak correlation of 0.169, significant to the 0.05 level, between questions on evaluation focussing on practices not the person, and positive effects on teaching practices. Teachers might take less notice of any comments about teaching as they relegate ownership of the evaluation process into Pusey's (1976) formal and bureaucratic domain exclusively, thus divorcing it from their classrooms. Clearly, from this correlation, if evaluation is to lead to enhanced teaching, it must contain within it equity, participation, openness, and fairness and respect. Despite this, as mentioned above, simply conducting evaluation could well have some positive benefit in focussing on pedagogy. However, the very limited evidence of evaluation practices in this sample, combined with the

moderate correlation value, suggests that those who achieve such benefits are rather few amongst Tasmanian teachers.

Evidence of Reflective Behaviours

The low level of formal evaluation processes in schools was insufficient evidence on which to base a judgement on the presence of reflective evaluation in schools. Because reflective practices could be conducted by individual teachers or in small collegial groups, they would not necessarily show up in formal appraisal processes or reporting, or indeed be associated with, and responded to in a question directed more to appraisal (Stodolsky 1988, pp.133-134). For this reason, it was decided to seek evidence of reflective practice and evaluation through the level of teacher interactions, in particular observation, and meetings about curriculum and teaching approaches, that might manifest from free and open exchanges of pedagogy.

Observation Practices

Table 5: Extent of Being Observed

Extent to which you agree or disagree with the statement - 'Other teachers regularly observe my classes'	N	Frequency
strongly disagree	54	30.7%
disagree	79	44.9%
agree	39	22.2%
strongly agree	4	2.3%
N=176, Missing=17		

The level of being observed is low at 24.5% of the sample, with very few teachers agreeing strongly to the question (Table 5). If the mentoring of student teachers was taken into account, the rate of actual observation for pedagogical reflection may well be lower. This is not to suggest that student teacher observation is any less valuable than that of an accomplished colleague, as it would still require the established teacher to reflect on the teaching of the student as opposed to their own practice. However, the allocation of student teachers is a programmed event and thus not initiated by teachers. For the same reasons, the high level of 75.6% of those not regularly observed suggests that these teachers may not even have the benefits of being observed in the class regularly by student teachers. This strongly suggests that most teachers in this sample, and probably throughout Tasmanian high schools, remain isolated in their classrooms behind closed doors. Furthermore, whilst there may be issues of opportunity and timetable demands, these figures do not suggest that teachers are actively reaching out to their colleagues to come and observe them at work.

Table 6: Extent of Observing Others

Extent to which you agree or disagree - 'I regularly observe other teachers teaching their classes'	N	Frequency
strongly disagree	40	22.6%
disagree	78	44.1%
agree	53	29.9%
strongly agree	6	3.4%
N=177, Missing=16		

The total rate of observing others is slightly higher than being observed at 33.3% (Table 6). Once again, the level of any reflective activity is likely to be lower, particularly if observing student teachers on their term long practicum is taken into account. Most significantly, the negative response remains at two-thirds of the sample.

Table 7: Observation Cross Tabulation

Extent to which you agree or disagree - 'Other teachers regularly observe my classes'	Extent to which you agree or disagree - 'I regularly observe other teachers teaching their classes'			
	strongly disagree	disagree	agree	strongly agree
strongly disagree	72.2%	18.5%	7.4%	1.9%
disagree	1.3%	78.5%	19.0%	1.3%
agree	.0%	12.8%	84.6%	2.6%
strongly agree	.0%	25.0%	.0%	75.0%

N=176, Missing=17

The impact of this is revealed in a cross tabulation of observation responses (Table 7). 72.2% of those who strongly disagreed with being observed also strongly disagreed with observing others. This rose to 90.7% when both *disagree* responses were combined. Similarly, 78.5% of those who were not observed disagreed with observing others, with only a slight increase up to 79.8% if the strong disagreement element is added in. The 84% *agree* and 75% *strongly agree* for those observed also observing others, clearly reveals a strong correlation to being observed and observing other teachers, reflected in a correlation value of 0.739 for this cross tabulation. If this is the case, and the lower negative value of not observing others of 66.7% from Table 6 is adopted, then almost two thirds of teachers in these high schools are unlikely to participate in the sharing of classroom teaching with their colleagues, or indeed anyone outside the classroom. This alone could be sufficient to suggest that isolation remains the norm in most Tasmanian high school classrooms, since that is where most of the craft of the teacher is practised. Such low levels of observation also raise serious questions about the presence of collegial reflective evaluation practices.

Table 8: Being Observed by Age

How old are you?	Extent to which you agree or disagree – 'Other teachers regularly observe my classes'			
	strongly disagree	disagree	agree	strongly agree
21-25	20.0%	60.0%	20.0%	
26-30	40.0%	33.3%	20.0%	6.7%
31-35	27.3%	36.4%	36.4%	
36-40	36.8%	42.1%	21.1%	
41-45	21.2%	48.5%	24.2%	6.1%
46-50	30.6%	36.1%	30.6%	2.8%
51-55	44.4%	44.4%	11.1%	
over 55	29.4%	58.8%	11.8%	

N=173, Missing=20

When analysed by age, the level of being observed is very low at 20% in the 21-25 year age group, the time when new teachers are developing their practical skills in the classroom in a real setting (Table 8). Not only does this reveal issues of observation of classroom practice, it also raises questions about induction processes, when teachers are also being socialised into the organisation and culture of the school. If most young teachers are not observed by senior colleagues, then one can question how decisions are made about tenure. If peer teachers do not help their younger colleagues, then how are teachers to learn the more subtle elements of their craft? The surge in strong negative responses up to 40% in the 26-30 year age group may reflect the awareness amongst these teachers of the absence of the benefits of observation. Alternatively, it might demonstrate even less intrusion and greater isolation as this group moves into the experienced, but still young age level, where teachers can be relied on alone with classes to maintain order, and deliver sufficient quantity of the curriculum. There is an increase in observation in the 31-35 year range. This drops off for the following decade to rise again in the 40 years plus age group, declining significantly again after 50.

Table 9: Observing Others by Age

How old are you?	Extent to which you agree or disagree - 'I regularly observe other teachers teaching their classes'			
	strongly disagree	disagree	agree	strongly agree
21-25	20.0%	40.0%	33.3%	6.7%
26-30	33.3%	33.3%	26.7%	6.7%
31-35	27.3%	18.2%	54.5%	
36-40	21.1%	52.6%	26.3%	
41-45	15.2%	42.4%	36.4%	6.1%
46-50	16.2%	43.2%	35.1%	5.4%
51-55	37.0%	51.9%	11.1%	
over 55	23.5%	52.9%	23.5%	

N = 174, Missing=19

The pattern of observing other teachers is slightly higher in the 21-25 year age range at 40%, but this still leaves 60% of young teachers not observing their fellow teachers (Table 9). The notable increase is in the 31-35 year age range, with 54.5% agreeing to observing colleagues. However, this figure may not be as positive as initially appears, because there is a reversion of 26.3% thereafter for the 36-40 year age group. This suggests that the observation referred to here is not that of ongoing reflective evaluation, because there would be no reason for a decline at an age when most teachers are well experienced and probably achieving the most physically capable years of their careers. Rather, this surge might reflect the monitoring of student teachers, since this particular age group would be flexible, enthusiastic, and capable enough to meet the demands of supporting their neophyte colleagues. Similarly, an increase to a combined 42.5% in the 41-45 year age group could also demonstrate observation for administrative purposes, such as promotion requirements, or to calm unruly classes where a teacher has lost control. However, such statements cannot be made clearly without evidence of respondent status.

If observation activities to evaluate and improve pedagogy occurred informally between teachers, this would not explain the higher rate of observation of others throughout, or the pattern of rise and fall in both observing and being observed. One might expect comparable values between the two activities, since one teacher must be observed, and another needs to do the observing in a collegial exchange. Furthermore, the two activities are not directly equivalent in value; teachers are more likely to benefit from having peers looking objectively at their practice than the converse. It is difficult to be reflective on one's pedagogy without some external perception of what it is that we ourselves do, regardless of how many other teachers we see at work (Schon 1983, p.333; Trethowan 1987, p.55, 70). This does not have to be a colleague teacher but may be the objective lens of the video camera, later viewed and reflected on by both the subject, and the peer.

If observation events were tied to informal evaluative processes there should not be a pattern of variations in ages, since teachers are not a homogeneous group, and support requirements probably would drive observation events in a continual reflective process. In addition, there would be no reason for latter age groups to suddenly decide to increase observation events if they had not experienced it in their initial five years of teaching, and if it was not a directed activity. The overall low rates of observation activity suggest that there is not an open culture of exchange of the fundamentals of teaching practice and that general classroom isolation remains the norm as pointed out in much of the literature (Knoblock & Goldstein 1971, p.7).

Exposing oneself is far more threatening than watching another, and infrequent events are likely to be regarded with suspicion and hostility, particularly as they are not ingrained as part of teachers' culture in the early years of their practice. If an open and reflective informal structure truly existed, one would expect to see increasing observation events as teachers moved into professional maturity and reflected more deeply on their practice (Stodolsky 1988, p.133). The data does not suggest this is the case.

Interaction Through Meetings

If observation did not appear to contribute to reflective practice then formal meetings in curriculum areas may represent key opportunities for teachers to interact and exchange ideas on and collectively reflect on teaching approaches. Such meetings could contribute to feelings of professional collegiality and help reduce tendencies towards isolation. Formal meetings were identified, because informal meetings may not actually progress towards discussion of learning and pedagogy, and it would be difficult to quantify every chance meeting in the corridor or staff room. The term Key Learning Areas (KLA) in retained from the terminology of the original survey. This term was used so that the grouping of a number of like subjects, such as those in technology, home economics and computing, and languages, where there might be only one or two teachers who could respond in their functional administrative or curricular groupings.

Table 10: Frequency of Meetings

	never	once or twice a year	every other month	once a month	once a fortnight	once a week	two or three times a week	almost every day
About how often do you have formal meetings with other teachers in your KLA area to discuss and plan curriculum or teaching approaches? N=172, Missing=21	12.8%	16.9%	17.4%	25.6%	18.6%	5.2%	1.7%	1.7%
About how often do you have formal meetings with teachers in other KLA's to discuss and plan curriculum or teaching approaches? N=159, Missing=34	22.6%	25.8%	11.9%	16.4%	17%	5%	0.6%	0.6%

Just over half of the survey group at 52.7% met with colleagues at least monthly in their learning areas to discuss and plan curriculum and teaching approaches (Table 10). The inclusion of those who met only every other month increased this figure to 70.3%. However,

this still left 29.7% as rarely meeting in any formal way with their peers in the same subject or learning area. The rate of meeting at least every month drops to 39.6% for meeting with other learning areas, and achieves a figure of only 51.5% if every second month is included. The figure for those who rarely attended cross-curricular meetings increases to 48.4%. However, very significantly, 22.6% of teachers appear to never meet with those teaching in other curricular areas. Because meetings with one's own subject or learning area colleagues is a more probable event, due to commonality of the subject itself, as well as the greater likelihood of discussion about similar learning topics and approaches, it is probable that the 29.7% who rarely met were also less likely to interact with colleagues teaching different subjects. This means that close to one third of the teachers surveyed never met rarely with any colleagues in any formal way to discuss curriculum or pedagogy.

Table 11 - Meetings With Own Key Learning Area by Age

	About how often do you have formal meetings with other teachers in your Key Learning Area to discuss and plan curriculum or teaching approaches?							
Age	never	once or twice a year	every other month	once a month	once a fortnight	once a week	two or three times a week	almost every day
21-25	40.0%	6.7%	6.7%		20.0%	6.7%	13.3%	6.7%
26-30	21.4%	14.3%	21.4%	35.7%		7.1%		
31-35	9.1%	27.3%	18.2%	18.2%	18.2%			9.1%
36-40		33.3%	27.8%	22.2%	16.7%			
41-45	6.3%	15.6%	15.6%	25.0%	21.9%	12.5%	3.1%	
46-50	11.8%	14.7%	11.8%	26.5%	26.5%	5.9%		2.9%
51-55	10.7%	17.9%	28.6%	25.0%	17.9%			
over 55	17.6%	11.8%	11.8%	41.2%	11.8%	5.9%		

N=169, Missing=24

Matching age groups to meetings within own learning areas revealed a significant figure of 40% of young teachers asserting that they never participated in such meetings (Table 11). Addition of those who met only once or twice a year raises the frequency of meeting rarely to half, an astounding figure for young teachers establishing their practice. What is even more concerning is that this implies yet another deficiency in the low levels of evaluation and observation, and reinforces the suspicion that teacher isolation remains the norm in many schools. Against this is balanced a frequency of 46.7% for those in this year group who met at a rate of fortnightly or more. Consequently, it appears that, as a graduate teacher in their first appointment, one is likely to meet often, or almost not at all. The frequent meeting level drops dramatically to 7.1% in the 26-30 year old group. For these experienced teachers, exactly those who are closest to the younger group, monthly or bi-monthly meetings appear the norm at 57.1%. Those meeting rarely declines to 35.7%, a figure that may be more significant and

sinister if the absence of meetings is in the same schools where a teacher serves for ten years or more.

Table 12 - Meetings With Other Key Learning Areas by Age

	About how often do you have formal meetings with teachers in other Key Learning Areas to discuss and plan curriculum or teaching approaches?							
Age	never	once or twice a year	every other month	once a month	once a fortnight	once a week	two or three times a week	almost every day
21-25	35.7%	7.1%	14.3%	14.3%	28.6%			
26-30	28.6%	14.3%	14.3%	21.4%	7.1%	14.3%		
31-35	18.2%	36.4%	9.1%	9.1%	27.3%			
36-40	27.8%	22.2%	16.7%	16.7%	11.1%	5.6%		
41-45	16.1%	25.8%	9.7%	16.1%	22.6%	6.5%		3.2%
46-50	10.0%	30.0%	13.3%	13.3%	20.0%	10.0%	3.3%	
51-55	24.0%	28.0%	12.0%	20.0%	16.0%			
over 55	38.5%	46.2%		15.4%				

N=156, Missing=37

Meetings with other learning areas compared to age reveals an improvement in the never meet figures for the 21-25 year age group, with a frequency of 35.7% (Table 12). However, the rare group of never to six monthly does not greatly change with a total of 42.8%. Against this, there is a better distribution of monthly up to fortnightly meetings at 57.2%, but this still leaves a sizeable proportion cut off in formal meeting terms from beginning colleagues in other subject areas. Thereafter, by age groups, the frequency of never meeting increases compared to the own learning area figures. The increase of just 7.2%, up to 28.6%, in the 26-30 years old group, rises by 9.1% to 18.2% in the next 31-35 year age group, and leaps from zero to 27.8%, over a quarter of the respondents, in the 36-40 year group. The significance of this trend is underpinned by the implementation of curricular change at the time, which sought to break down the barriers between subjects in a more holistic approach towards curriculum.

Furthermore, if the never and six monthly frequencies are added together into a rare meeting category, then the figure is at least 40% throughout, suggesting that a significant proportion of teachers did not engage in regular cross-curricular meetings. Notably, if it is accepted that meeting with one's immediate subject or learning area colleagues is likely to be a higher priority, when the 42.8% for 21-25 year olds here is compared to the previous table, at least 40% of teachers in their formative years post graduation appear not to attend any formal meetings to discuss curriculum or teaching approaches.

Table 13: Meetings and Influence by Own Department

About how often do you have formal meetings with other teachers in your KLA area to discuss and plan curriculum or teaching approaches?	Extent to which you agree or disagree – 'Other teachers in my department have a considerable influence on my teaching practices.'			
	strongly disagree	disagree	agree	strongly agree
never	19.0%	57.1%	14.3%	9.5%
once or twice a year	3.7%	55.6%	37.0%	3.7%
every other month	3.3%	43.3%	53.3%	
once a month	11.4%	25.0%	52.3%	11.4%
once a fortnight	3.1%	12.5%	68.8%	15.6%
once a week		12.5%	87.5%	
two or three times a week		33.3%	33.3%	33.3%
almost every day	33.3%		33.3%	33.3%

N=168, Missing=25

Table 13 illustrates the direct relationship between meeting with colleagues and influence on teaching practices. Meetings with colleagues in one's own learning area fortnightly yields an influence by other teachers frequency of 68.8%, which increases to 84.4% if the *strongly agree* return is added. This corresponds very closely to the influence frequency of 87.5% for weekly meetings. Colleague influence on teaching practices still remains significant for monthly meetings, with an *agree* response of 52.3% and *strongly agree* at 11.4%, combined yielding a frequency of 63.7%. The influence figures thereafter decline, with once or twice a year manifesting a total of 59.3%, and never meeting rising to a negative influence response of 76.1%. Monthly meetings with one's own department colleagues thus appear to be the minimum if there is to be any realistic expectation of influence on teaching practices. If this is the case, then the 40% of the 21-25 year age group who never meet with their immediate colleagues may receive very little influence on their pedagogy. One can but speculate on how the influence on teaching practices occurred for the 23.8% of respondents in this table who never participated in formal meetings. Perhaps what they report are, in fact, not pedagogical influences in the deeper sense, but rather teaching ideas or "tricks of the trade".

Table 14: Meetings and Influence by Other Departments

About how often do you have formal meetings with teachers in other KLA's to discuss and plan curriculum or teaching approaches?	Extent to which you agree or disagree - 'Teachers in other subject departments have a considerable influence on my teaching practices'			
	strongly disagree	disagree	agree	strongly agree
never	22.2%	58.3%	19.4%	
once or twice a year	15.0%	40.0%	45.0%	
every other month	16.7%	38.9%	33.3%	11.1%
once a month	7.7%	34.6%	53.8%	3.8%
once a fortnight	3.7%	48.1%	48.1%	
once a week		62.5%	25.0%	12.5%
two or three times a week	100.0%			
almost every day		100.0%		

N =157, Missing=26

The influence on teaching practices as a result of formal meetings with other department teachers reflects lower values overall (Table 14). The highest influence is at the monthly meeting level at a frequency of 53.8% in the *agree* response, which rises to 57.6% if the *strongly agree* value is included. The meeting fortnightly 48.1% *agree* figure interestingly is not significantly greater than the bi-monthly combined agree level of 44.4%, and the half-yearly positive frequency of 45%. There is certainly a lesser trend of meeting frequency influence than in the own department Table 13. This may result from teacher questions about appropriate translation of teaching practices between subject areas. Nonetheless, if the aim is to encourage teacher interaction and exchange to support reflective practices, then monthly meetings ought to be encouraged. At the same time, the approximately 40% of the survey, that never met with colleagues in other learning areas, clearly overwhelmingly acknowledged that they were not influenced by their colleagues, with a strong denial frequency at 22.2%, and a denial frequency of 58.3%, totalling 80.5%.

For influence to occur, teachers need to actually discuss and share the fundamentals of teaching in a situation of collegial reflection. It is difficult to comprehend claims to be influenced by colleagues by those who never meet in a formal setting. The only positive interpretation is that these respondents have open and frank relationships with their peers so that influence occurs in the normal process of the school day. However, with teachers still constrained by timetables and very busy with other duties involving students, it is surprising that these teachers would not have indicated the frequency of contact, since some level of formality would exist in arranging a time to meet on more than one occasion. It seems more probable that the influence again refers to anecdotal discussions of practice rather than the intimate sharing of teaching experiences (Fullan 1997, pp.38-39; Holly 1989, p.110).

Observation and Meetings as Collaborative Practices

Table 15: Correlation of Teacher Interactions

	About how often do you have formal meetings with other teachers in your KLA area to discuss and plan curriculum or teaching approaches?	About how often do you have formal meetings with teachers in other KLAs to discuss and plan curriculum or teaching approaches?	Other teachers regularly observe my classes	I regularly observe other teachers teaching their classes	Other teachers in my department have a considerable influence on my teaching practices
About how often do you have formal meetings with teachers in other KLAs to discuss and plan curriculum or teaching approaches?	0.427(**)	1		.	
Other teachers regularly observe my classes	0.334(**)	0.230(**)	1		
I regularly observe other teachers teaching their classes	0.297(**)	0.213(**)	0.731(**)	1	
Other teachers in my department have a considerable influence on my teaching practices	0.307(**)	0.152	0.263(**)	0.243(**)	1
Teachers in other subject departments have a considerable influence on my teaching practices	0.099	0.189(*)	0.211(**)	0.214(**)	0.422(**)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Observation and meetings alone may not demonstrate the evidence of reflective practices that is being sought in this section of the study. For that reason they were correlated with each other and against factors such as influence and trust.

Table 15 correlates the issues of observation, meetings and influence. The strongest correlation, at 0.731 significant at the 0.01 level, is between observing others and being observed, mentioned previously. Whilst a caution about the possible inclusion of practicum events (the colleague teacher being both observed and observing) needs to be restated, this figure supports the assertion that the actual process of sharing teaching with others breaks down suspicion and isolation both ways. The correlation between being observed and regularly meeting with one's own department is moderate, 0.334 significant at the 0.01 level, with meeting with other learning areas weaker, 0.230 significant at the 0.01 level. Observing others also maintains weak

correlations in these areas at 0.297 significant at the 0.01 level, and 0.213 significant at the 0.01 level, respectively. This suggests that those involved in formal meetings to discuss teaching practice are influenced towards observation, but this is likely to be a lesser factor. Perhaps the definition of the meetings as formal may place them into the realm of compulsion that accords less with the individual motivation of reflective practice that would support the openness of observation practices that are not compelled or formalised.

The correlation between being observed and influence on teaching practices is weak, with other teachers in one's own department at 0.263, and other departments at 0.211, both significant at the 0.01 level. Similarly weak is the correlation of observing others and influence in one's own department at 0.243, and other departments at 0.214, significant at the 0.01 level. These weak correlations provide the best evidence that the observation responses in this survey were directed primarily at other than the frank and open interchange of pedagogy. Whilst such cases appear to occur, the majority of observation events probably are related to administrative events, such as observation for tenure where the observer is in a position of assessment rather than open to exchange, or else they represent the influence of student teachers on practicum. If the latter were to represent a significant proportion of the observation events, then these figures could also suggest that most of the established teachers are not interacting with the novices at a level, and to an extent, that their own teaching is significantly influenced. Regardless of the form of events, such a weak correlation suggests that observation at present does not illustrate evidence of reflective practices.

Influence from meetings within one's own learning area generated a moderate to weak correlation factor of 0.307, significant at the 0.01 level, whilst meeting with other departments resulted in a weak value of 0.189, significant at the 0.01 level. This suggests that the conduct of meetings alone is insufficient to generate influence, but that identifying with colleagues in the same subject area is more likely to result in worthwhile exchange. However, the moderate correlation of 0.427, significant at the 0.01 level, for own and other subject area meetings on curriculum and teaching practice suggests that the conduct of both is more likely to maintain the contact and collegiality necessary to counter isolation. The outcomes may not be significant at present, but it must be borne in mind that around one third of teachers in this survey were rarely attending meetings of any form, and that the participation in at least one formal interaction may improve collegiality and influence, and contribute to the construction of a real professional community. Ingvarson has noted that such a community exists

when teachers have built shared values and professional norms, when there is a strong sense of collegiality and plenty of opportunity to plan and review work together, and where there is a strong commitment to norms of continuous improvement and evaluation of practice (Ingvarson 1995, p.21).

Table 16: Correlation of Trust and Collaborative Practices

	Extent to which your school is characterised by a trusting and collaborative environment	Extent to which your school is characterised by staff willingness to take initiatives and risks	Extent to which your school is characterised by staff feeling valued	I am evaluated on a regular basis by my supervisors
Extent to which your school is characterised by staff willingness to take initiatives and risks	0.683(**)	1		
Extent to which your school is characterised by staff feeling valued	0.669(**)	0.658(**)	1	
I am evaluated on a regular basis by my supervisors'	0.246(**)	0.337(**)	0.277(**)	1
Other teachers regularly observe my classes	0.203(**)	0.196(**)	0.135	0.369(**)
I regularly observe other teachers teaching their classes	0.182(*)	0.144	0.096	0.283(**)

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

The purposes of observation are opened to further question when they are matched against evaluation (Table 16). In the case of being observed, the correlation with evaluation is moderate at 0.369 significant to the 0.01 level, with observation of others weaker at 0.283 significant to the 0.01 level. Observation thus does not appear to form a significant part of the evaluations referred to in this survey. Whilst the value of occasional observation has been questioned earlier in this study, its inclusion in this case would at least intimate some direct interest in classroom performance. Being observed, matched against questions on the school being characterised as a trusting and collaborative environment, yielded a weak correlation of 0.203, significant to the 0.01 level, whilst staff willingness to take initiatives and risks was weaker at 0.196 significant to the 0.01 level. Consequently, whilst they had an influence, these observation experiences do not appear to have contributed significantly to staff trust and confidence. This is further supported by neither form of observation yielding a notable correlation with staff feeling valued, 0.135 and 0.096 with little significance, so that current observation activities cannot be supportive of staff professionalism and work quality. Conversely, evaluation at least generated a moderate to weak correlation of 0.277 significant to the 0.01 level, against staff feeling valued.

The loss to the school and teachers of not increasing staff perceptions of feeling valued is revealed by the strong correlation between it and feelings of collegiality, 0.669 significant to the 0.01 level, and readiness to take risks, 0.658 significant to the 0.01 level. Once again, the evaluated teachers seemed to feel good on both counts, 0.246 significant to the 0.01 level, and 0.337 significant to the 0.01 level, respectively, even though such correlations were moderate to weak.

Factors Impacting on Evaluation

Low levels of evaluation and observation, as well as high rates of rare attendance at meetings identified in this survey raise serious doubts about reflective practices in Tasmanian high schools. To gain some idea of why teachers themselves had not initiated their own evaluative or reflective practices, the influence indices referred to in the introduction to this chapter were applied to questions in the survey. These indices were derived from statistically combining responses to Question A1 in the School Governance Survey (Appendix 2) that examined teacher perceptions of influence ownership in areas such as curriculum and teaching methods, staff selection and allocation, and other school planning dimensions.

Table 17: Correlation of Influence Perceptions to Evaluation

	index of principal influence	index of principal and senior staff influence	index of senior staff influence	index of consultative group or committee influence	index of school staff as a whole influence	index of individual teacher influence
I am evaluated on a regular basis by my supervisors	-0.134	0.037	0.212(*)	0.209(*)	-0.001	-0.161
Evaluation affects my teaching practices in a positive way	-0.040	0.017	0.094	0.101	0.047	-0.054
Evaluation is not a mechanism that my supervisor uses to enforce compliance	0.279(**)	0.088	-0.043	0.030	0.056	0.073
Evaluation in my school is open to staff input	-0.090	0.016	-0.017	0.095	0.183(*)	-0.083
Evaluation in my school is fair and respectful	-0.301(**)	0.005	0.067	0.108	0.212(*)	-0.119
Evaluation in my school focuses on skills or practices rather than personalities	-0.302(**)	0.072	0.047	-0.050	0.254(**)	-0.153
Evaluation in my school makes me feel like a professional rather than an employee	-0.226(*)	-0.006	0.169	0.179(*)	0.125	-0.103

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

An overview of Table 17 reveals that, whilst the values are moderate to weak, teachers tend to see their influence on the fair and appropriate application of evaluation as resting with the staff as a whole. Fairness and respect are 0.212, significant to the 0.05 level, whilst evaluation focussing on practices rather than personalities is 0.254 significant to the 0.01 level. The principal is perceived negatively in both of these areas, being -0.301, significant to the 0.01 level, and -0.302 significant to the 0.01 level, respectively. Similarly, whilst the senior staff correlates weakly with evaluation, at 0.212 significant to the 0.05 level, perhaps as the primary evaluation functionaries, it also indicates minimal correlation to other evaluation elements, especially those areas dealing with respect and fairness. These trends for both the principal and senior staff appear to reinforce teacher suspicion of the formal level of the school as postulated by Pusey (1976). However, in an interesting twist, teachers tend to see the principal as the key factor in ensuring that supervisors do not use evaluation as a tool for compliance, with a moderate to weak correlation value of 0.279 significant to the 0.01 level.

From the perspective of this research, the minimal to negative correlations of individual teacher influence on evaluation elements is significant. This suggests that individual teachers feel powerless to influence the evaluation process. Rather, they perceive any influence as within collective consultative groups in the areas of evaluation overall, with a value of 0.209 significant to the 0.05 level, and for being treated as a professional rather than an employee, showing up as 0.179 significant to the 0.05 level Similarly, the influence of the whole school staff correlates with evaluation being open to staff input, 0.183 significant to the 0.05 level, evaluation being fair and respectful, 0.212 significant to the 0.05 level, and evaluation focussing on skills rather than personalities, 0.254 significant to the 0.01 level.

Whilst collective correlations are weak overall, their combination with the minimal to weak negative values for individual teacher influence suggests that, despite the adoption of more collegial management styles in schools, teachers continue to be suspicious of the hierarchical formal structure represented by the principal and school leadership. It also helps explain why teachers have not taken ownership of evaluation as a pedagogical tool; the individual teachers feel powerless to do so, and the collective groupings, where their influence is seen to reside, have not assumed ownership of the issue. Furthermore, with minimal evaluation occurring at all, and the possibility that most processes at work are directed towards tenure and career advancement, teachers would likely be concerned that their peers protect their interests. The correlation of evaluation elements to collectives thus appears to represent teacher desires for equitable and professional treatment in an organisational sense, rather than with regard to

exposure of their teaching practices (Ball & Goodson 1985, p.11; Peterson & Chenoweth 1992, p.177).

Table 18: Correlation of Influence Perceptions to Teacher Initiative/Cooperation

	index of principal influence	index of principal and senior staff influence	index of senior staff influence	index of consultative group or committee influence	index of school staff as a whole influence	index of individual teacher influence
Extent to which your school is characterised by staff willingness to take initiatives and risks	-0.263(**)	-0.070	0.001	0.261(**)	0.199(*)	-0.281(**)
Other teachers in my department have a considerable influence on my teaching practices	-0.081	0.014	0.161	0.140	-0.100	-0.133
Teachers in other subject departments have a considerable influence on my teaching practices	-0.097	-0.111	-0.002	0.267(**)	0.129	-0.092
Other teachers regularly observe my classes	-0.097	-0.077	0.102	0.173(*)	0.045	-0.042
I regularly observe other teachers teaching their classes	-0.059	-0.119	0.089	0.138	0.050	-0.004

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

The trend of influence categories continues into correlations with teacher initiative and cooperation questions (Table 18). In the area of risk taking and initiative, the consultative group yields a weak correlation of 0.261 significant to the 0.01 level, and school staff as a whole yields a weak 0.199 significant to the 0.05 level. However, both the principal, at -0.263 significant to the 0.01 level, and the individual teacher, -0.281 significant to the 0.01 level, perform very poorly. Aside from this question, only the influence of other departments, 0.267 significant to the 0.01 level, and other teacher observation of one's classes, 0.173 significant to the 0.05 level, manifested any correlation. Whilst these values may be weak, they are certainly higher than other areas, suggesting that, once again, teachers demonstrate a collective perspective on school issues. The observation values particularly are notable, because the almost zero values, -0.042 for being observed, and -0.004 for observing others, intimate that teachers feel no control, and thus possess no ownership of exposing and sharing classroom practice. In fact, this table continues from Table 17 the feeling and perceptions of individual teacher weakness.

These tables, consequently, suggest that teachers feel they have little power to overcome their present classroom isolation and take independent control of their professional practice. Within this isolation, clearly demonstrated in minimal meaningful interaction on pedagogy, teachers are most likely seeking support in a collective driven both by the nature of the job, as suggested by Bidwell, and by contractual and industrial arrangements that regard them as homogeneous employees, rather than diverse individuals at different career stages and with unique needs (Bidwell 1965, p.980; Perrow 1970, p.52; Trethowan 1987, p.68). Similarly, Ramsey found that:

> teachers do not have a strong, shared identity as professional practitioners. They are more likely to identify with:
>
> - employer-determined structures such as a primary school grade, a secondary subject faculty or the school in which they teach
> - a professional association covering a subject discipline, with priority generally given to supporting teachers' knowledge and understanding of the curriculum rather than a focus on pedagogy
> - a teacher union (Ramsey 2000, p.33).

These results suggest not just that teachers feel individually powerless, but also raise the possibility that teacher responses to questions about evaluation and collaboration are within the *formal structure* and *technology* dimensions outlined by Pusey (1976). By directing their answers away from the individual, respondents might be exhibiting protection of the *social system*, that affective area of the educational relationship where they feel most vulnerable. If this is the case, the interactions that occur either in observation or collegial meetings, as well as evaluations, may not be penetrating the core of teaching practice. Conversely, the current system may be actively working against true collegiality and individual reflection by consistently reinforcing the isolation, and, at the same time, the relative security of the individual's actual teaching practice (Schon 1983, p.332). Even when evaluations occur, their restriction to the formal and technical domains is likely to leave teachers feeling relatively secure, provided they have adhered to the technical aspects of teaching and kept within the bureaucratic guidelines (McLaughlin & Pfeifer 1988, p.42; Beare 1989, p.13). Kleinhenz, Ingvarson and Chadbourne (2002) cynically describe this process as a 'hypocritical game in which teachers and administrators, in their own ways, tacitly conspire, to protect their own and each others' territory' (Kleinhenz et al. 2002, p.5).

If teachers feel individually powerless, as is revealed in Tables 17 and 18, and tend towards collective structures in meeting external demands, it appears unlikely that they would act to overcome their own classroom isolation by exposing their classrooms to others. This suggests a paradox in schools. Isolation is likely to increase feelings of vulnerability to evaluation, hinder open sharing of details of teaching with colleagues, and reduce feelings of influence in the school and broader educational community. (McLaughlin & Pfeifer 1988, p.5). However, the positives generated by exposure to that same vulnerability through shared experiences, such as mutual observation, should increase teacher confidence and yield a more independent perspective on teaching standards. Ultimately, such confidence should lead to a greater say in the management of change, and improved learning for students (Gitlin & Smyth 1989, pp.5-6, 63, 95). The issue becomes one not so much of the benefits for professionalism of reducing isolation and enhancing pedagogical discourse between teachers, but rather of how to start such a process given what may be presently a self-sustaining environment (McLaughlin & Pfeifer 1988, pp.15, 26-27, 58-59; Jones 1987, p.201; Gitlin & Smyth 1989, pp.37, 164-165). Undoubtedly, issues of time are relevant (McLaughlin & Pfeifer, 1988, p.69; Holly, 1989, p.110). However, this ought not obstruct those determined to make a difference (Schon, 1983, pp.334, 337).

Table 19: Correlation of Interaction and Positive School Factors

	Extent to which your school is characterised by a trusting and collaborative environment	Extent to which your school is characterised by staff willingness to take initiatives and risks
About how often do you have formal meetings with other teachers in your KLA area to discuss and plan curriculum or teaching approaches?	0.145	0.107
About how often do you have formal meetings with teachers in other KLA's to discuss and plan curriculum or teaching approaches?	0.223(**)	0.201(*)
Other teachers regularly observe my classes	0.203(**)	0.196(**)
I regularly observe other teachers teaching their class	0.182(*)	0.144
Other teachers in my department have a considerable influence on my teaching practices	0.143	0.164(*)
Teachers in other subject departments have a considerable influence on my teaching practices	0.211(**)	0.187(*)
I am evaluated on a regular basis by my supervisors	0.246(**)	0.337(**)
Extent to which your school is characterised by staff willingness to take initiatives and risks	0.683(**)	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 18 illustrates the positive values of active interaction in schools. Formal meetings with other departments supports school trust and collaboration, with a moderate correlation of 0.223, significant to the 0.01 level. The establishment of a school environment of trust is also enhanced by being observed, 0.203 significant to the 0.01 level, evaluation, 0.246 significant to the 0.01 level, and being open to the influence of others, 0.211 significant to the 0.01 level. The willingness of staff to take initiatives and risks, a significant requirement at time of educational change, is also enhanced by interaction. Risk taking correlates with being observed, 0.196 significant to the 0.01 level, formal meetings with colleagues in other departments, 0.201 significant to the 0.05 level, evaluation, 0.337 significant to the 0.01 level, and being open to the influence of colleagues, 0.187 significant to the 0.05 level. These correlations may be weak, but they are likely to be greater than in the absence of evaluation, observation, or interaction with colleagues from other departments, which probably has been the case for sizeable proportions of teachers within this analysis. Most importantly, if the interaction factors contribute to both trust and the taking of initiatives and risks, these two elements themselves correlate strongly, at 0.683 significant to the 0.01 level, indicating positive benefits for the school, teachers and students. Consequently, minimal observation and evaluation, and rare meetings with colleagues, are unlikely to yield the best outcome for anyone in the school community.

Professional Development Practices

The overall response to professional development in this survey was positive among Tasmanian high school teachers, a not surprising result given the acceptance of it as part of the professional and industrial teaching landscape. The survey found that good professional development is seen as an integral part of a positive workplace environment, and this accords with the findings of *PD 2000 Australia* where 60% of teachers nationally rated professional development as a very high priority (McRae et al. 2001, p.8). The Tasmanian teachers valued professional development that occurred within the school and was directed to their immediate teaching and learning needs, calling into question the applicability of the many out of school workshops that continue to be widely advertised.

Table 20: PD Activity Rates for Previous 18 Months by Location

	PD Programs		PD Days	
School	Mean	Std. Deviation	Mean	Std. Deviation
R1	4.0000		6.5000	
R2	2.8333	1.83485	5.8333	7.02614
R3	5.3333	.57735	10.0000	2.00000
R4	5.2000	3.03315	8.6000	5.98331
R5	6.0000	3.53553	7.2500	3.40343
R6	3.4286	.78680	6.7500	3.91882
R7	3.7500	1.28174	5.3750	1.99553
R8	2.7500	1.50000	3.7500	1.89297
R9	4.6667	3.05505	7.6667	2.51661
R10	4.5714	2.56348	7.7500	4.07040
R11	7.0000	6.13188	13.7273	20.00545
R12	5.5000	3.14787	8.0833	4.83281
R13	9.0833	6.75586	8.2143	2.79668
R14	4.6667	3.74166	5.0000	2.64575
R15	7.8000	5.01996	8.5714	3.99404
M1	9.2000	9.28440	11.6667	5.27889
M2	5.0000	2.94392	8.0000	2.82843
M3	5.5455	4.74054	8.1818	8.81837
M4	4.1250	1.45774	10.1250	4.54933
M5	6.7000	4.02906	8.2273	4.08267
M6	7.5000	5.04975	12.3333	15.10850
M7	7.7500	5.61991	8.2500	6.75154
M8	5.0000	2.16025	5.7500	1.25831
M9	4.4444	2.83333	6.0556	3.89266
M10	8.0000	2.82843	10.0000	.00000
N=162 Missing=31	5.5154	4.07096	8.1818	7.32834

Participation

Participation levels were examined by, school, employment category, and ages, to determine any obvious trends that might impact on this research. Analysis of teacher reported professional development activity for 18 months in regional (R) high schools yielded means ranging from 3 to 9 programs, taking from 4 up to 12 days (Table 20). Metropolitan (M) schools had higher rates of 4 to 9 programs, taking from 6 to 14 days. Whilst this survey did not discriminate between activities within or outside school, the zero participation frequency was only 1.39% (3 out of 193), rising to 4.19% for one day or less, and 8.84% for two days or less. This compares favourably with the findings of *PD 2000* where one in twelve teachers participated in no professional development in school hours, and fewer than one in five did less than one day in school hours in 1999 (McRae et al. 2001, p.8). In this sense, Tasmanian teachers have certainly progressed in participation. With only 14.88% of this survey reporting three days or less professional development, the Tasmanian figure also compares favourably to the assessment by Ingvarson in 2002 that 'Although there has been a significant shift to school-based activities over recent years, over 50 per cent of teachers said that the total time spent per

year on professional development activity in school hours was 2-3 days or less' (Ingvarson 2002, p.16).

There is no evidence to suggest that the difference between regional and metropolitan figures is due to any factors other than the practical obstacles of distance, learning opportunities, and relief teacher availability (McRae et al. 2001, p.155). Whatever the cause, the low figures of 4 or 5 days, matched with low Standard Deviation (SD) figures in some regional schools, suggests that there may be less teacher time expended on improving individual pedagogy, after collective professional development activities, such as presentations on centrally driven curricular change or other topics, are considered. The same appears to apply in some metropolitan schools, such as M2 and M8, where low standard deviation values indicate cohesion in responses, so that the professional development programs are possibly collective, and driven by other than variable individual teacher classroom needs. The data in Table 20 might provide deeper insights if the type of professional development activities undertaken, teacher motivation, and time allocations between school and personal time had been determined. However, *PD 2000* noted that topics covered were strongly driven by curricular and assessment practice, behaviour management, school self-management procedures, compliance training on topics such as equity issues, and stress and time management (McRae et al. 2001, pp.8-9). The cohesion displayed in some schools suggests that this trend continues.

Table 21 : PD Days for Previous 18 Months by Employment Categories

	N	Mean	Std. Deviation
Sex			
female	82	8.0549	8.15021
male	79	7.5949	4.55597
N	161	7.8292	6.61818
Missing=32			
Full or Part time			
part time	35	5.2857	2.85504
full time	126	8.5357	7.17863
N	161	7.8292	6.61818
Missing=32			
Contract or permanent			
contract	23	5.1522	2.82616
permanent	137	8.2993	6.98171
N	160	7.8469	6.63514
Missing=33			

Analysis by employment categories reveals that professional development time expenditure was a mean of 8 days for females, and 7.6 days for males. (Table 21). Whilst these figures are very similar, a higher standard deviation figure for females of 8.15, compared to males at 4.55, suggests that there was a greater variation between the teachers themselves. This may have

been caused by less discretionary time for self-initiated professional development for part time females in the face of family demands. Part time teachers had a lower mean rate of professional development days at 5.3, as compared to the full time 8.5 days, but this would be expected because of lesser teaching loads, and perhaps contractual professional development demands for some. The lower standard deviation, of 2.85, as opposed to the full time 7.18, indicates not only a higher level of homogeneity in the part time sample, but might also suggest attendance at collective events, rather than individually initiated learning to meet pedagogical demands. A correlation of the mean days expended and the standard deviation figures between the part time and contract teachers, and their permanent and full time counterparts, could indicate that the 23 contract teachers were part of the 35 part time teacher sample.

Table 22: PD Participation by Age in Previous 18 Months

Age Range	PD programs		PD Days	
	Mean	Std. Deviation	Mean	Std. Deviation
21-25	5.2667	4.62086	6.5667	4.20402
26-30	4.8077	3.88125	6.6923	4.47930
31-35	5.7000	3.02030	8.0556	4.85054
36-40	4.2500	2.29492	7.6250	4.50000
41-45	6.2581	4.87830	8.3281	4.50020
46-50	5.7143	4.17677	7.9143	5.47385
51-55	5.9545	4.45589	10.3200	13.60674
over 55	4.5294	2.67202	6.5882	3.80885
Total	5.4623	4.01837	7.9846	6.83874
N-159 Missing=34			N-162 Missing=31	

Analysis by ages reveals a similar mean amount of professional development programs and days for teachers in their first ten years of teaching, with only a minor increase of 1 to 1.5 days thereafter (discounting the 51-55 year age group due to a very high standard deviation) (Table 22). If teachers were motivated in their professional development by individual requirements to renew content knowledge and pedagogy, or to develop new skills and capabilities as part of preparation to assume leadership roles, one could expect to see a significant increase in activity commensurate with age and confidence. However, the homogeneity of both the mean results and the standard deviation intimate that professional development for most of the survey teachers is occurring at a consistent rate, subject to motivations other than an individual desire to enhance personal pedagogy, and perhaps driven by organisational requirements.

Such an interpretation would explain the step up in the post-30 year age groups where senior teachers may be required to attend information sessions on curricular changes, or receive at

least some training in management procedures in their particular school (McRae et al. 2001, p.154). The increase does not appear so substantial as to suggest that there are major developments in this area, but if these teachers are spending a larger part of the increase on administrative agenda, they might suffer a consequent decline in professional development related to actual teaching. Conversely, if there is not a significant increase in professional development for established teachers to undertake leadership or management positions, then seniority rather than training and qualifications could remain the main prerequisite for advancement. In such a case, there may be no external reward for the additional effort expended toward individual professional enhancement.

The rather consistent level of professional development across ages might suggest that stage theory does not apply, or is inappropriate in the case of professional development, and that teachers continue to undertake learning at a consistent rate regardless of their status, experience, and needs. Alternatively, personal attitudes may play a significantly lesser role in professional development participation, as would be the case if it was collectively driven, rather than undertaken individually. Nevertheless, stage theory suggests caution in that not all teachers are at the same point in their professional and personal development. In other words, stage theory can reveal a level of individuality that can easily be overlooked when talking about teachers and their professional learning needs as a whole. If indeed the figures in Tables 20-22 indicate cohesion in professional development, the efficacy of such programs can be questioned in that they might not take sufficient account of personal differences and needs (Ingvarson 1998b, p.1020). Such criticism can be emphasized if one incorporates the low evaluation figures cited previously in this chapter. A cohesive professional development structure has to assume homogeneity of its audience, because the basis for differentiating between teachers, an established evaluative mechanism to discriminate stages, does not exist. As a consequence, the targeting of particular support and professional development challenges, such as outlined by Oja, also cannot exist (Oja 1991, p.54).

Professional Development Programs

Table 23: Professional Development Activities

	PD generally involves individual teachers attending workshops in other schools or centres	PD activities generally involve the schools teaching staff engaging in collective reflection and planning	PD programs generally focus on the fundamental issues of teaching and learning
strongly disagree	11.2%	4.7%	5.3%
disagree	48.5%	34.7%	25.7%
agree	33.7%	55.9%	63.7%
strongly agree	6.5%	4.7%	5.3%
N	169	170	171
Missing	24	23	22

60.6% of respondents identified professional development activities as primarily consisting of collective reflection and planning with colleagues, and this correlated with a similar value of 59.7% disagreeing with teacher attendance at workshops in other schools or centres (Table 23). This corresponds with the results of *PD 2000,* which identified discussions with colleagues as part of a workshop, or visiting speaker, as the most common professional development activities (McRae et al. p.128). The majority, at 69%, of Tasmanian teacher respondents felt that the professional development was appropriately targeted at the fundamental issues of teaching and learning. Whilst the *disagree* frequency was 25.7%, becoming a total of 31% if the *strongly disagree* group was added, this may not be indicative of poor practices, but could reflect reduced individual teacher interest in school directed collective events that are not seen as valuable, despite organisational justifications.

Table 24: Professional Development Management Response

	PD programs are well planned	PD programs are well managed	PD programs are effective and not a waste of time
strongly disagree	6.5%	5.3%	7%
disagree	22.5%	20.1%	15.7%
agree	55.0%	58.0%	59.9%
strongly agree	16.0%	16.6%	17.4%
N	169	169	172
Missing	24	24	21

Most teachers considered professional development programs as well planned and well managed, with total response frequencies of 71% and 74.6%, respectively (Table 24). A similar proportion of respondents, at 77.3%, also considered that professional development programs were effective and not a waste of time. Whilst this is a positive return for the current professional development culture and management, more than one in five Tasmanian teachers

were dissatisfied with these aspects of professional development management. This latter figure is of note, because it was important for this study to determine if professional development was driven by collective and directed purposes, or the consequence of individual reflective motivations. If professional development was perceived as collective, the affirmative figures in these tables could reflect satisfied consumers responding to school directed activities. If the motivations were individual, then this would raise questions of how professional development choices were made in the absence of established evaluation structures, perhaps intimating some element of reflective practice to derive individual professional development needs. To determine the level of collective direction or individual determination, the influence level factors utilised in the evaluation section of this chapter were correlated against professional development questions addressing both management and effectiveness.

Table 25: Correlation of Influence Levels and PD Management

	index of principal influence	index of principal and senior staff influence	index of senior staff influence	index of consultative group or committee influence	index of school staff as a whole influence	index of individual teacher influence
Extent to which your school is characterised by a trusting and collaborative environment	-0.347(**)	-0.074	0.170	0.182(*)	0.235(**)	-0.307(**)
Extent to which your school is characterised by on-going and relevant PD	-0.187(*)	-0.087	0.101	0.035	0.246(**)	-0.167
Extent to which your school is characterised by provision of professional development focussed on teaching and learning	-0.177	-0.127	0.072	0.102	0.235(**)	-0.147
I have a say about the PD programs in which I participate	-0.091	-0.098	0.113	0.079	0.288(**)	-0.058

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

The pattern of correlations in Table 25 strongly supports the supposition that teachers see professional development as essentially a collective activity. The school staff as a whole represents the only significant influence factor in the school being characterised by professional development that is on-going and relevant, 0.246 significant to the 0.01 level, and focussed on teaching and learning, 0.235 significant to the 0.01 level. The same influence factor applies to the school being perceived as trusting and collaborative, 0.235 significant to the 0.01 level, and a place where teachers feel ownership of professional development direction through making

their own choices, 0.288 significant to the 0.01 level. This accords with Ingvarson's observation that 'high achieving high schools promoted collaborative decisions among staff about professional development' (Ingvarson, 2002, p.12). However, these correlations are reasonably weak and do not, of themselves, demonstrate a strong shift in the direction of the school staff as a whole. Rather, the significance of these figures is underpinned more by the low values of other influence groups in the school.

The principal rates as a weak negative -0.187, significant to the 0.05 level, for on-going and relevant professional development. A similar negative value of -0.177, with no significance, is attributed to school professional development focussed on teaching and learning. Thereafter, both the principal, and principal and senior staff, categories reveal minimal correlations in all areas. It is only in the consultative group category that trust and collaboration achieve a very weak correlation value of 0.182, significant to the 0.05 level. However, the individual teacher rates a moderate negative correlation of -0.307, significant to the 0.01 level, for influencing trust and collaboration, and very weak negative values on the other professional development management questions.

Table 26: Correlation of Influence Levels and PD Effectiveness

	index of principal influence	index of principal and senior staff influence	index of senior staff influence	index of consultative group or committee influence	index of school staff as a whole influence	index of individual teacher influence
PD programs are effective and not a waste of time	-0.079	-0.130	0.223(*)	0.131	0.268(**)	-0.140
PD programs are followed up	-0.146	-0.052	0.095	0.203(*)	0.213(**)	-0.190(*)
PD programs pay attention to the real needs of teacher	-0.184(*)	-0.052	0.141	0.180(*)	0.287(**)	-0.142
PD programs have had a significant and lasting impact on the quality and effectiveness of my teaching	-0.217(*)	0.002	0.120	0.099	0.212(*)	-0.099

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Table 26, where influence indices are matched against questions relating to professional development effectiveness, manifests a similar trend, with the whole school staff identified as most influencing the success of professional development programs. The whole staff shows a weak positive correlation with professional development being effective and not a waste of time, 0.268 significant to the 0.01 level, and for programs being followed up, 0.213 significant to the 0.01 level. It also was the most influential group in meeting individual teacher needs,

0.287 significant to the 0.01 level, and for the programs having a lasting impact on classroom practice, 0.212 significant to the 0.01 level. Consultative group or committee influence also has a role to play with a weak figure for professional development follow-up, 0.203 significant to the 0.05 level, and for meeting teacher needs, 0.180 significant to the 0.05 level. The notable senior staff influence in professional development effectiveness, at 0.223 significant to the 0.05 level, may relate more to the influence of this group on the planning and execution of whole school professional development events.

As in the previous table, it is not so much the strength of the correlations, but the significant negatives of the other influence groups, most significantly the individual teacher, that is the most revealing. With negative values on program effectiveness of -0.140, and program follow up, -0.190 significant to the 0.05 level, it would appear that teachers feel they lack influence or power to affect professional development outcomes. Even more significant are the very weak negative correlations for professional development meeting the real needs of teachers, at –0.142 , and impacting on teaching quality, at -0.099. Teachers thus seem to not identify an active and constructive role for themselves in securing professional development effectiveness and transferring it into effective classroom practice. What changes are made, consequently, may be achieved by *we*, rather than *me*.

A combination of the data in both tables suggests that professional development is seen as other than an individual responsibility (Ingvarson 1998b, p.1007). Rather, because of significant correlations between participation input and the school staff as a whole influence factor, teachers consider professional development as a group activity focussed on collective professional need. This accords with the findings of *PD 2000,* which stated that

> teachers are interested in “big ideas”, educational trends and new knowledge not immediately applicable in the classroom. This very large group of teachers claims it is as interested in those things as it is in talking about its work with colleagues (McRae et al. 2001, p.12).

Teachers' responses in that report similarly identified the individual as of a lesser relevance than the administration or a committee for professional development decision making (McRae et al. 2001, p.122). If this is the case, Tables 25 and 26 can be further interpreted as reflecting views of teachers that the most effective professional development is that which deals *collectively* with learning issues within the school and yields agreed solutions or changes to pedagogy within and for the *group* of teachers.

Table 27: Professional Development Outcomes

	PD programs pay attention to the real needs of teachers	PD programs are followed up
strongly disagree	17.5%	12.8%
disagree	31.0%	50.0%
agree	45.0%	33.7%
strongly agree	6.4%	3.5%
N	171	172
Missing	22	21

This judgement is supported by Table 27, which illustrates that close to half of the respondents, at 48.5%, felt that professional development did not pay attention to their real needs, with 17.5% of those feeling strongly. The proportion considering that professional development programs were not followed up was higher at 62.8%. Although the strong negative group was smaller, the 50% disagree figure is a significant response. As a result of this data, one can judge that around half of the teachers were not satisfied with the applicability or completion of professional development offerings. These figures also appear to be lower than *PD 2000*, which quoted figures of 23.9% saying that work was regularly followed up and 46.2% saying 'sometimes' (McRae et al. 2001, p.9).

Table 28: Professional Development Ownership

	I have a say about which PD program I participate in	I have input into the development of PD programs in my school
strongly disagree	2.4%	5.2%
disagree	24.3%	41.4%
agree	53.3%	43.7%
strongly agree	20.1%	9.8%
N	169	174
Missing	24	19

An examination of ownership responses reveals that a total of 73.4% of teachers agreed that they have a say about their professional development participation (Table 28). The *strongly disagree* response was very low at 2.4%. However, when these figures are compared to the responses for teacher input into professional development, the *agree* figure drops to 43.7%, and *strongly agree* to 9.8%, totalling 53.5%. This suggests that the selection response reflects more the choices made from offerings, rather than real ownership. Furthermore, when compared with previous tables, these figures imply that around half of the responding teachers may be mere consumers of professional development product, rather than professional managers of their own learning. In this data, there is a suggestion that the teachers do not own their development in a professional sense, and it may be another indicator against reflective practice. If reflective practice and self initiated informal evaluative processes were at work, then one might expect to

see a higher proportion of teachers developing learning appropriate to their own needs, following up on their own learning, and establishing their own professional development programs exclusive of school offerings. However, these responses suggest that teachers are not assuming responsibility to try to overcome themselves the shortfalls in school professional development programs. Meanwhile, if as noted by Asayesh, 'Consistent follow-up and support seems to be one element present in all successful programs', then the absence of follow-up in over half of the cases could intimate that a large proportion of school programs may not achieve their objective, or translate to classroom practice (Asayesh 1993, p.25).

The identification of professional development as a collective event may inhibit teachers from identifying issues in, and reflecting on, their own pedagogy because professional development becomes not something done at one's own behest, but always carried out with fellow teachers to meet some centrally determined need (Smyth 1998b, p.1248). From this latter perspective, enhancement of teaching becomes something done across the staff or profession, through collective engagement with curricular change, rather than the activity of one or two teachers working together to improve their pedagogy in the classroom. For participation, *PD 2000* ranked observation and discussion of teaching practice sixth behind collective activities, namely workshop discussion with colleagues, an outside speaker followed by discussion, conference attendance, directed training sessions, and cross-school workshop discussion (McRae et al. 2001, p.128). External curricular pressures such as the Essential Learnings Framework (2002) in Tasmania, or other changes in assessment procedures, could further move teachers away from reflection on actual teaching, as funding and time release for professional development are scheduled within implementation plans. This accords with the substantial rates of around 40% attendance at activities organised by external agencies in *PD 2000* (McRae et al. 2001, p.138)

A collective professional development culture outside of the classroom also may disempower the teacher as an independent professional, as argued by Smyth, for whom the collaborative culture can in fact increase teacher vulnerability by undermining their autonomy (Smyth 1995, pp.78-79, 87; Smyth 1998b, pp.1248, 1263). If we accept Pusey's (1976) description of the dimensions of teaching, then it is not just that the Principal is excluded from the affective domain of the classroom, but also that the technical domain of teaching assumes a collective aspect that can be similarly isolated. Teachers are able to participate in professional development in a collective environment, which does not threaten them, because it does not have to penetrate the affective domain of the classroom. Individual teachers are not called

upon to exert efforts to reinvent their own teaching because they are identified as part of a collective, the needs of which are determined centrally, and the professional enhancement is defined merely by participation in the professional development itself. Conditions may not have progressed since *PD 2000* noted that

> In the majority of cases it occurs systematically with the needs of individual teachers identified through surveys, appraisals or other forms of investigation. The meshing of individual and institutional needs, prospectively a most difficult task, may not always occur to the satisfaction of all participants, but it does occur (McRae et al. 2001, p.163)

Attendance alone is equated with improvement or development (DuFour 2004, pp.63-64). Increased role expansion and diffuseness may enhance such feelings. Whilst half of the survey group may have felt that professional development programs paid insufficient attention to their real needs, the fault is easily attributed elsewhere, on professional development planners and providers, onto whom teachers pass the responsibility for delivery of a product that is expected to meet their needs, and who are judged by the teachers generally to plan and manage programs well (Asayesh 1993, p.25). Whilst there is no data to directly indicate the existence of systematic program validation by professional development managers, the significant negative response rates to follow up and appropriateness of programs for teachers' needs, suggests that these are, at the least, ineffective. Furthermore, if teachers still feel that their professional development is well planned and managed, then the teachers themselves may be unaware of the connection between the planning and evaluative phases of professional development.

Views on Effective Professional Development

If, from the perspective of these non-Mathematics teachers in this survey, there are issues with professional development structuring, follow-up and ownership, then it is useful to examine a correlation of teacher perceptions of effective professional development elements.

Table 29: Correlation of Professional Development Effectiveness

	Extent to which your school is characterised by provision of PD focussed on teaching and learning	PD programs have had a significant and lasting impact on the quality & effectiveness of my teaching	PD programs generally focus on fundamental issues of teaching and learning	PD programs pay attention to the real needs of teachers	PD activities generally involve the school's teaching staff engaging in collective reflection and planning
Extent to which your school is characterised by on-going and relevant PD	0.742(**)	0.344(**)	0.465(**)	0.447(**)	0.346(**)
Extent to which your school is characterised by provision of professional development focused on teaching and learning	1	0.345(**)	0.531(**)	0.454(**)	0.382(**)
PD programs are well planned	0.383(**)	0.365(**)	0.387(**)	0.569(**)	0.286(**)
PD programs are well managed	0.502(**)	0.328(**)	0.471(**)	0.623(**)	0.301(**)
PD programs are effective and not a waste of time	0.462(**)	0.481(**)	0.460(**)	0.562(**)	0.269(**)
PD programs are followed up	0.395(**)	0.488(**)	0.420(**)	0.619(**)	0.397(**)
PD programs have had a significant and lasting impact on the quality and effectiveness of my teaching	0.345(**)	1	0.381(**)	0.347(**)	0.235(**)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

The strongest correlation, 0.742 significant to the 0.01 level, was between professional development focussed on teaching and learning, and characterisation of the school as one where teacher learning is relevant and ongoing (Table 29). It is thus not sufficient for schools merely to run active and busy professional development programs. These must be focussed on teaching and learning, as opposed to administrative or organisational processes, for them to be considered as relevant for teachers. This is borne out by moderately strong correlations of teacher perceptions of professional development effectiveness with programs focussing on the real needs of teachers, 0.569 significant to the 0.01 level, and being directed to the fundamental issues of teaching and learning, 0.460 significant to the 0.01 level. Notably, these same professional development effectiveness perceptions demonstrated a weaker correlation with the engagement in collective reflection and planning, 0.269 significant to the 0.01 level. This suggests that, whilst collective reflection and planning are seen positively, 0.346 significant to

the 0.01 level, particularly where they are followed-up, 0.397 significant to the 0.01 level, such activities may not be intrinsically valuable, and may be superseded by more relevant and appropriate programs.

The second strongest correlation set overall in Table 29 was between professional development meeting the real needs of teachers and the programs being well planned, 0.569 significant to the 0.01 level, well managed, 0.623 significant to the 0.01 level, and followed up, 0.619 significant to the 0.01 level. As a consequence, for most of 62.8% of teachers who considered that their professional development was not followed up, the programs in their schools cannot have been meeting their real pedagogical needs. Teacher attitudes towards the meeting of such needs are important as they impact on judgements of professional development effectiveness, with a correlation of 0.562 significant to the 0.01 level. Despite the correlations being weaker, if professional development is to have a lasting impact on pedagogy, then it also must focus on teaching and learning, 0.345 and 0.381 significant to the 0.01 level, and be clearly relevant to teacher needs, 0.347 significant to the 0.01 level. Such a focus is more likely through collective reflection and planning, with correlations significant to the 0.01 level close to 0.3 in all of the questions, as opposed to external activities which manifested almost zero or very weak negative throughout.

Whilst the correlations are moderate to weak, the surveyed teachers are demonstrating through this survey that, for proper professional development to generate any transmission of learning into classroom practice, it requires good planning, 0.365 significant to the 0.01 level, good management, 0.328 significant to the 0.01 level, and follow up, 0.488 significant to the 0.01 level. This is achieved through working with colleague teachers focussed on teaching and learning, rather than external course attendance, which rates nowhere near as useful, or worth the expenditure of time or funds (Hawley & Valli 1999, p.140; McRae et al. 2001, p.11). This, in itself, is significant as it reinforces the view that the professional development of teachers is about pedagogy and students, and that peers remain the best equipped to help teachers learn more about their job. At the same time, it intimates that there is little value of a teacher returning from an external workshop and enthusiastically reporting in a staff meeting (Hawley & Valli 1999, p.134). Rather, whatever is learned is best transmitted through a reflection and planning process where teachers are able to gauge the relevance and appropriateness of the initiative (Hawley & Valli 1999, p.143).

Professional Development and Morale

Table 30: Correlation of Professional Development and Positive Work Attitudes

	Extent to which your school is characterised by staff feeling valued	Teachers take pride in this school	Teachers are not stressed by community expectations	Teachers are not stressed by DoE requirements
PD programs are well planned	0.404(**)	0.302(**)	0.058	0.160(*)
PD programs are well managed	0.504(**)	0.434(**)	0.033	0.201(**)
PD programs generally focus on fundamental issues of teaching and learning	0.419(**)	0.299(**)	0.024	0.150(*)
PD activities generally involve the school's teaching staff engaging in collective reflection and planning	0.309(**)	0.233(**)	0.069	0.168(*)
I have a say about the PD programs in which I participate	0.422(**)	0.386(**)	0.050	0.067
I have input into the development of PD programs in my school	0.261(**)	0.245(**)	0.045	0.103
PD programs are effective and not a waste of time	0.414(**)	0.310(**)	0.158(*)	0.352(**)
PD programs are followed up	0.452(**)	0.340(**)	0.088	0.271(**)
PD programs have had a significant and lasting impact on the quality and effectiveness of my teaching	0.425(**)	0.355(**)	0.108	0.167(*)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Professional development effectiveness extends beyond the mechanics of performance. Table 30 reveals that there are also workplace attitude factors attached to professional development programs, be they individual or as a collective whole within the organisation. The strongest factors in the table are in good professional development management, which not just enhances staff perceptions of being valued, at 0.504 significant to the 0.01 level, and imbues teachers with school pride, 0.434 significant to the 0.01 level, but also partially reduces feelings of stress in the face of departmental requirements, 0.201 significant to the 0.01 level. Although this may be a general feeling amongst teachers, these figures are also likely to include feelings of concern or apprehension related to the centralised implementation of curricular change at the time, and teacher insecurities regarding the time available to transform the ideas into classroom change (Darling-Hammond & McLaughlin 1999, p.397-398).

Whilst schools may not have met teacher needs totally in such a time of curricular transition, effective programs that focus on the fundamental issues of teaching and associated with the change are likely to maintain positive staff morale, reflected by values of 0.414 and 0.419 significant to the 0.01 level respectively. Effective professional development should also help teachers to deal with the new demands and counter perceptions of stress against departmental pressures, 0.352 significant to the 0.01 level. Similarly, appropriate follow-up of the professional development programs can imbue teachers with a sense of being valued, 0.452 significant to the 0.01 level, underpin staff pride in the school, 0.340 significant to the 0.01 level, and ease stress caused by departmental requirements, 0.271 significant to the 0.01 level.

Interestingly, an overview of Table 30 reveals that teachers perceive almost no connection between their professional development and community expectations. Structure, planning, and management of professional development are all well below the 0.1 mark with no significant correlation other than effectiveness, a very weak 0.158 significant to the 0.05 level. The latter figure may be prompted by some teachers concern at having to be familiar with, and answerable to parents for, a long term and far-reaching curricular change. However, the significant point here is that, if teachers were true professionals, and answerable to their primary customers, then one would expect higher figures throughout the community column. Again, this may reflect organisational influences at work, with teachers either shielding the classroom from external scrutiny from another source, or not associating professional development with any community expectation factors.

The consistent correlation through the individual value perceptions and organisational pride elements reveals that professional development cannot be viewed as a mere workplace requirement, be it industrial or organisational. As a contributor to staff value, school pride, and responses to external bureaucratic stress, professional development needs to be viewed by both schools and teachers as a very serious factor in both pedagogy and organisational well being. The significance of follow-up in Table 30 clearly illustrates that professional development cannot stop when staff leave the workshop or presentation, and that validation and on-going support of teachers to integrate new learning is a necessary part of school positive feelings. Adopting the alternative perspective, good morale and a positive environment should increase teacher receptivity to professional development (Darling-Hammond & McLaughlin 1999, pp.383-384). This is not surprising given the feeling amongst teachers that professional development is both a right and a duty, and that allocation of time to deal with curricular change, or development of additional work skills, is the norm.

The only individual elements in the table, input to professional development and selection of programs, reveal an interesting aspect. Matched against the school being characterised by staff feeling valued, input into professional development programs yielded a value of 0.261, significant to the 0.01 level, and teachers taking pride in their school yielded a figure of 0.245, significant to the 0.01 level. However, having a say in professional development selection rated significantly higher, at 0.422 and 0.386, significant to the 0.01 level, respectively, when applied to the same value and pride questions. This appears to support the supposition in this chapter of a level of passivity towards professional development, and intimates that teachers might see it more important to be able to choose offerings, rather than to be active participants in the structuring and development of their own programs. Once again, there is possible evidence here of anti-professional behaviour, because true professionalism would suggest teachers assuming a controlling relationship in determining and meeting their own pedagogical development needs. A further measure of the level of true professionalism might be the rate of post-graduate study in the sample. Of the 193 teachers in this survey, only eight had completed Master of Education degrees, and another four had Masters degrees in other areas, such as Arts or Sciences. Whilst the responses did not indicate the studies underway, this represented a very low 6.2% and compares unfavourably with the one in eight, or roughly 12%, reported in *PD 2000* (McRae et al. 2001, p.11). This seems to underpin a comment in that study that 'teachers were generally seeking no further form of accreditation towards higher qualifications (McRae et al. 2001, p.11).

Table 31: Correlation of Professional Development and Morale

	Extent to which your school is characterised by a trusting and collaborative environment	Extent to which your school is characterised by high staff morale	The morale of teachers in this school is high	Teachers work with enthusiasm
PD programs generally focus on fundamental issues of teaching and learning	0.394(**)	0.444(**)	0.363(**)	0.350(**)
PD generally involves individual teachers attending workshops in other schools or centres'	-0.010	-0.111	-0.035	0.088
PD activities generally involve the school's teaching staff engaging in collective reflection and planning	0.341(**)	0.322(**)	0.292(**)	0.244(**)
I have a say about which PD program I participate in	0.331(**)	0.422(**)	0.446(**)	0.345(**)
I have input into the development of PD programs in my school	0.213(**)	0.241(**)	0.272(**)	0.268(**)
PD programs are effective and not a waste of time	0.293(**)	0.382(**)	0.337(**)	0.356(**)
PD programs are followed up	0.331(**)	0.409(**)	0.406(**)	0.370(**)
PD programs have had a significant and lasting impact on the quality and effectiveness of my teaching	0.252(**)	0.351(**)	0.325(**)	0.350(**)

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Professional development contributes to school morale in most areas, other than attendance at external activities, which yields negligible figures across morale, -0.111 and –0.035, and teacher enthusiasm, 0.088 (Table 31). This result supports the view in literature that teachers tend to look to their colleagues for immediate assistance, and that they learn best in their own professional communities (Nias 1998, p.1259; Hargreaves 1997b, p.98; Hubermann 1995, p.206; DuFour 2004, p.63). However, the correlation between collective engagement in reflection and planning, is weak against teacher morale and enthusiasm, at 0.292 and 0.244, both significant to the 0.01 level. This suggests that, whilst the definition of professional development as external workshops alone was incomplete, and thus criticised in the literature, the current teacher view of professional development, as something in which the whole staff engages, may also not generate the most effective outcomes in teacher performance and feelings of efficacy. *PD 2000* noted that:

> A whole school focus has led to many disappointments…the notions, perhaps misunderstandings, that the locus of work must always be the

> whole institution and that unless the whole organisation has changed, nothing has, are recipes for failure and cynicism which is a product of defeated idealism (McRae et al. 2001, p.163).

Where professional development focuses on fundamental issues of teaching and learning, it enhances morale, interestingly more across the school as a whole, at 0.444 significant to the 0.01 level, than just the teachers, 0.363 significant to the 0.01 level. In a similar fashion, appropriate focus on teaching and learning impacts higher on the school as a collaborative and trusting environment, at 0.394 significant to the 0.01 level, than individual teacher enthusiasm, 0.350 significant to the 0.01 level. This may be no more than teachers identifying issues other than professional development as impacting more on their individual morale, perhaps personal relationships with colleagues or supervisors. However, the figures for morale might also be affected by teachers perceiving professional development as more a collective rather than individual activity.

Notable also in Table 31 are the higher values for professional development being followed up when matched to school and individual morale, 0.409 and 0.406, both significant to the 0.01 level. Teachers being given a say in their professional development program selection correlates similarly to these morale questions, with values of 0.422 and 0.446, both significant to the 0.01 level. These results suggest that teachers are aware, and perhaps even protective, of their professional development rights. They do not appear to wish to be dictated to as to what choices they make, but expect the programs to be completed. However, Table 27 revealed that 62.8% of teachers felt that programs were not followed up, and 26.7% of teachers felt in Table 28 that they did not have sufficient say in their professional development choices. Thus, these two elements represent significant issues for professional development management and school morale as the programs that should enhance teacher capabilities and autonomy concurrently may work against the best interests of the organisation. The issue becomes more interesting if the professional development program input question is correlated to those examining morale. The morale values themselves are almost halved, at 0.241 and 0.272 significant to the 0.01 level. This suggests that the impact of questions of choice exceed that of professional development program structuring and delivery, another indicator that many teachers may remain consumers rather than true participants in their own development.

Teacher enthusiasm is associated with professional development programs that consider individual desires, 0.345 significant to the 0.01 level, are effective, 0.356 significant to the 0.01

level, and are followed up, 0.370 significant to the 0.01 level. The weak to moderate correlation values indicate that professional development plays a significant role in teacher participation and engagement, and that it needs to be taken into account and actively managed. However, there is here again the intimation in the teacher responses that they see this is an organisational responsibility. This view is supported by the professional development having a lasting effect on the quality of teaching scoring only a moderate to weak value against teacher enthusiasm of 0.350, significant to the 0.01 level. If reflective practice, and greater professionalism, were the norm, highly effective and embedded professional development would be expected to yield surges in teacher enthusiasm to being able to better meet the needs of teaching and student learning. Similarly, such a positive outcome also would be expected to raise school and individual morale higher than the figures of 0.351 and 0.325, both significant to the 0.01 level, respectively in Table 31.

Table 32: Frequency of Professional Development Meeting Teacher Needs

PD programs pay attention to the real needs of teachers	N	Frequency
strongly disagree	30	17.5%
disagree	53	31.0%
agree	77	45.0%
strongly agree	11	6.4%
N=171, Missing=22		

The source of the problem appears to rest again in the question of ownership. Table 32 reveals that 48.5%, close to half of survey respondents, felt that professional development did not meet their perceived pedagogical needs. The eventual question that can be asked is why these teachers, or the higher 62.8% who denied that programs were followed up, did not undertake independently, or one might say professionally, to remedy their own learning needs? If this is a shortfall, then values in the correlations for teacher enthusiasm and morale might be restricted by professional development being perceived as external to the teachers themselves. Consequently, programs may not penetrate and impact on the classroom to connect to teacher perceptions of the efficacy of their own pedagogy. If the professional development programs are designed and structured by other than teachers themselves, and do other than respond to real classroom needs, then perhaps teacher selection becomes a greater issue in the search for relevance and some element of control, so that any impact on enthusiasm reverts to a potential, but not necessarily fulfilled, outcome.

Hubermann, (1995) and others, have argued logically that effective change requires teachers to work through the new demands to develop their own understanding and make it a natural part

of their practice (Hubermann 1995, p.207; Darling-Hammond & McLaughlin 1999, p.384). Yet this requires differing levels of support based on the teacher's position and capabilities (Darling-Hammond & McLaughlin 1999, p.393; Oja 1991, pp.47, 51). Clearly a collective approach alone will leave some teachers unsupported, because their individual needs before and after are subsumed by the collective whole.

Teachers themselves may in fact identify as consumers rather than active participants in the development process, infantilising them in what Ingvarson describes metaphorically as a supermarket or shopping mall environment (Ingvarson 1998a, p.128; Ingvarson 2002, p.17). *PD 2000*, in an examination of what teachers liked best, found that teachers rated the factor of *place my work re that of other teachers* lowest behind other options, such as the provision of practical ideas and trends in educational thought. The highest rating of *provide practical ideas*, suggests that teachers are more oriented to collecting tricks of the trade rather than reflecting back on their own practice as the source of teaching approaches (McRae et al. 2001, p.136). Furthermore, teacher isolation itself may become a protective behaviour in that it yields a collective benefit of anonymity, so that shortfalls and weaknesses can be attributed elsewhere, especially if it is due to the change being of such size as to trigger coping strategies (Guskey & Sparks 1996, p.35; Smyth 1998b, p.1263, 1268; Collins 1991, pp.16-17). In this way, the current view of professional development may be working against the establishment of a culture of individual reflection where each teacher has to confront their own practice in an objective fashion. Rather it may be yielding collegiality for its own sake (Smyth 1998b, pp.1250, 1264; Ingvarson 1998a, p.131). This was illustrated in *PD 2000* where a question on preferred activities saw coaching/mentoring and watching and discussing teaching practice fall to tenth and eleventh place out of twelve, well behind workshopping with colleagues and listening to speakers (McRae et al. 2001, p.149).

This is not to suggest that either the collective perspective or indeed external workshop participation is wrong. From the collective professional development point of view, the latter obviously is going to yield fewer returns for the teaching staff as a whole, but it must remain to some extent as a means to gain particular knowledge or skills not available within a school. If workshop participation becomes the basis for extending the knowledge of teachers within the school through effective follow up then the process can be argued to be worthwhile (Hawley & Valli 1999, p.141; Ingvarson 2002, p.7). Rather, the issue is the absence of individual teacher's reflection and remediation of their own pedagogy from current professional development programs. If such a perspective did exist, we would expect to have seen it reflected in greater

perceptions of individual power in regard to questions of professional development management and efficacy, and, most significantly, self-initiated follow-up that would manifest in classrooms (Elmore & Burney 1999, p.272; Richert 1991, p.123; Asayesh 1993, p.26). *PD 2000* argued exactly this when it noted that

> well developed in-service programs designed to support individual teacher development in a general sense are few and far between….There is also, we believe, a clear need to get more shape, system and purpose into professional development activity for individual teachers (McRae et al. 2001, p.165).

Literature stresses that exactly this is essential if educational change and progress is to occur and if schooling is to meet current social and individual needs (Hargreaves 1997b, p.99). Unless teachers' thinking changes about the teaching and learning process, namely unless they assume greater professional responsibility, professional development efforts are likely to remain stultified (Ingvarson 1998b, p.1011, 1027; Cooper 1991, pp.90-91; Asayesh 1993, p.25). As Ingvarson stated: 'in any profession, professional development is more than keeping up with policy changes made by governments and employing authorities' (Ingvarson 1998a, p.129).

However, it would be wrong to suggest that teachers, such as those who responded to this survey, are not trying to do their best. Rather, it can be suggested that the system as it is structured, concentrating on the collective, hinders the next individual stage. Because the current system suits the organisational structure of schools, and teachers acquiesce to this as the normal order of things, it reveals the negative pressures identified by Smyth (Smyth 1998b, pp.1244, 1263; Richert 1991, p.114). At the very least, it makes teachers into professional development followers and imitators, rather than initiators and experimenters (Hargreaves 1997b, p.100; Guskey 1995, p.118).

Professional Development and Reflective Practices

Professional development effectiveness measures were correlated with reflective practices identified earlier in this chapter to determine if they impacted on professional development outcomes.

Table 33: Correlation of Professional Development and Reflective Practices

	I am evaluated on a regular basis by my supervisors	Other teachers regularly observe my classes	I regularly observe other teachers teaching their classes	Other teachers in my department have a considerable influence on my teaching practices	Teachers in other subject departments have a considerable influence on my teaching practices
PD programs generally focus on fundamental issues of teaching and learning	0.165(*)	0.052	0.050	0.088	0.240(**)
PD programs pay attention to the real needs of teacher	0.299(**)	0.211(**)	.155(*)	0.140	0.216(**)
PD programs are effective and not a waste of time	0.289(**)	0.089	0.109	0.050	0.085
PD programs are followed up	0.345(**)	0.201(**)	0.115	0.092	0.093
PD programs have had a significant and lasting impact on the quality & effectiveness of my teaching	0.228(**)	0.125	0.061	0.098	0.079

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

The highest value of 0.345, significant to the 0.01 level, is between evaluation, and professional development programs being followed up (Table 33). Since 62.8% of the survey felt that follow-up did not occur, this suggests that the evaluation process may have fulfilled some degree of this need for evaluated teachers through, if nothing else, the examination of professional development participation and general, rather than detailed individual pedagogical, outcomes. A similar process may have yielded the correlations between evaluation and professional development program effectiveness, 0.289 significant to the 0.01 level, and programs meeting individual teacher needs, 0.299 significant to the 0.01 level.

There are weak correlations between being observed and perceptions of professional development meeting real teacher needs, 0.211 significant to the 0.01 level, and it being followed up, 0.201 significant to the 0.01 level. These figures would be expected higher if the observations were directed at reflective pedagogy, because the observations would either generate new learning or determine the effectiveness of professional development activities completed. That the correlation is not greater is more likely to rest with the observation activities being administrative, such as for tenure or promotion, or student teaching, as opposed

to the real act of classroom teaching. Furthermore, observation of others manifests minimal correlations with professional development, the only correlation at all being 0.155, significant to the 0.05 level, for professional development paying attention to teacher needs. As with being observed, if the activity of observing was motivated by pedagogy, then it would be expected to relate back to professional development, particularly if such learning were related to curriculum change, or the impact of other research that changes classroom teaching.

Within the areas of influence on teaching practices, the only correlations with professional development are between teachers in other departments and professional development focussing on teaching and learning, 0.240 significant to the 0.01 level, and programs paying attention to the real needs of teachers, 0.216 significant to the 0.01 level. The absence of correlations with follow-up, and lasting impact on teaching practices, suggests in both teachers' own department and beyond, that the professional development is not structured to bring teachers together in an intimate and truly collegial opening of teaching practice. Other departments may manifest some correlation because of the collective professional development program bringing together teachers in reflection and discussion about differing subject areas where mutual knowledge might be low. Interaction with immediate colleagues about classroom practice conversely could be hampered by feelings of vulnerability generated by their intimate knowledge of subject specific syllabuses, content, and approaches. Teachers in other departments, meanwhile, can be kept at a respective distance where influence can penetrate without fear of compromise.

Table 33 does not raise optimism about the connections between reflective practices and effective professional development. However, this does not suggest that such a connection should not exist. Rather, in the case of this survey, it may reveal a dissonance caused by low levels of observation, and the possibility that these are directed to other than enhancing teaching, as well as high non-participation rates in formal meetings on practice and curriculum. If teachers are not focussed on pedagogy in the form of reflective practice, the appropriateness and effectiveness of professional development can only be guessed at, because of the potentially different objectives of both the teachers and the party delivering the program. The positive correlations for evaluation, moderate to weak though they may be, attest clearly to a worthwhile trend in professional development efficacy. This suggests that, whilst current evaluation practices may not be widespread or effective, they nevertheless will have some positive professional development impact that at least establishes a link between teacher

performance and teacher learning, a connection that appears absent for many of these survey participants.

Conclusion

The state wide survey revealed that there was no widespread practice of evaluating teachers' pedagogy to enhance the quality of teaching and learning in Tasmanian high schools. The evaluations that were conducted appeared to be directed to other purposes, perhaps selection for promotion or performance management of the survey members who were in leadership positions. In this sense, this survey data reinforced statements made in research about Australia being a *tabula rasa* for reflective evaluation, and that appraisal practices that might have been established in the 1980's have deteriorated or become cursory. However, more significantly, the data in this survey of teachers reveals a shortfall in the type of interactive practices that would establish a foundation for professional reflective evaluation in the future. Most teachers appear to remain isolated, with rare observation of their colleagues, and those perhaps directed by purposes other than the enhancement of pedagogy.

With around one third of teachers rarely meeting formally in their own learning area to discuss issues of curriculum and pedagogy, and about half infrequently meeting with other learning area colleagues, the educational environment does not appear one where teachers are truly sharing intimate classroom experiences in an open way and reinventing their pedagogy to meet new challenges. The impression, rather, is of employees who are fulfilling their work obligations. Such a condition is unlikely to break down isolation and suspicion, and move teachers towards greater professionalism, because the most fundamental trust, engendered by real sharing of teaching through contact and observation, is not being established and reinforced on a continuing basis. A major factor in maintenance of the current situation appears to be a collective response to issues related to evaluation, observation, and interaction, and other dealings within the school. With the individual teacher influence correlations being very low in all areas, teachers appear unwilling and unlikely to assume professional responsibility for their own practice. Established collective approaches probably ingrained through a history of industrial action direct teachers toward a collective response. The dilemma is that such collegiality also rests upon the acceptance of a perception of equality, and the protection of individual weakness behind historically ingrained attitudes. With over two thirds of younger teachers, between twenty and thirty years of age in this study, neither observed and evaluated, nor involved in truly collegial practices of sharing the fundamentals of teaching and learning, it appears that newer practitioners continue to be socialised into an environment that

works against their own autonomy and that of teachers in general. They perhaps join a collective culture that they perceive as normal, and internalise standard practices and attitudes from their peers.

The analysis of the data indicates that the collective perspective carries across to professional development, perhaps even more so than evaluation because of its more widespread application and acceptance. Whilst the data in this survey was too broad to enable detailed analysis of activities and practices, teacher dissatisfaction of 62.8% with the level of follow up, and 48.5% disagreeing that professional development meets their needs, suggest that the responses about good professional development planning and management are sourced in other than classroom pedagogical outcomes. However, low teachers influence levels as against the whole school collective imply that teachers feel unable to structure their own professional development to meet individual shortfalls not being addressed currently. The question is whether this perspective is one of disempowerment or acceptance of the collective training, or learning, need as the predominant state of affairs above that of the individual. The problem may be sourced partially in the employment of the term *Professional Development* to encompass all aspects of both organisational training, and the enhancement of individual professional skills. Imparting information on curricular change or procedural changes in a school, or a workshop on a computer program, might have no immediate and direct impact on the way a teacher works in a classroom, and indeed may require interpretation and adaptation to become applicable or relevant to student learning in each particular school or class (Killion 2003, p.16). Thus, it can be argued that such activities are not professionally *developmental* in the real sense of the word, because they only impart theoretical knowledge or different ways of doing things. The development or change occurs when teachers apply such new knowledge to change the way they operate in the classroom, in accordance with their individual teaching style and student needs (Asayesh 1993, p.27). Such transmission of enabling knowledge might be better termed *professional training* as it enhances the knowledge base of the teacher. The actual *professional development* element could then be represented by the synthesis of the acquired knowledge into the teacher's learning repertoire towards improvements in student learning, or else the daily refinement of personal classroom skills as part of a continual reflective process (Darling-Hammond & McLaughlin 1999, p.390). This conclusion is in accord with the recommendation of *PD 2000* to establish 'a sophisticated and effective professional development "system"…for individual learning which runs in parallel with the collaborative and institutional focus of "workplace" learning' (McRae et al. 2001, p.165).

A differentiation between collective training and individual learning would also allow more appropriate thought about, and measurement of, professional development activity and impacts. It also would have the advantage of signifying to both teachers and management that there is an additional stage in the professional learning process, and that the consistent efforts of practitioners to incorporate changes and improvement into their classrooms require acknowledgement. Furthermore, if there were to be an effort made to inculcate a culture of widespread reflective practice in Tasmanian schools, such a differentiation would signify that individual professional development is complementary to current activities thus avoiding the potential for suspicion and concern at a focus on individual teachers (Guskey 1995, p.118). It is to meet this particular concern, and to establish a focus, that Ingvarson champions systematic profession-designed standards, a clear idea of what it is that teachers need to become good at, and a means to achieve that end (Ingvarson 2002, p.16). Ramsey supported this view stating that: 'Only through clear professional structures will teachers be able to exercise the professional responsibility they have for improving the quality of their individual practice' (Ramsey 2000, p.84). *PD 2000* came to the same conclusion, arguing for a 'clear need to get more shape, system and purpose into professional development activity for individual teachers' (McRae et al. 2001, p.165).

The establishment of an enhanced individual professional development perspective is strongly supported in the literature with arguments that the ideal structure is one where individual and organisational processes are complementary (Elmore & Burney 1999, p.264; Darling-Hammond & McLaughlin 1999, p.399; Killion 2003, p.17; Guskey 1995, p.119; Guskey & Sparks 1991, p.73; McRae et al. 2001, p.165). The data in this survey suggests that Tasmanian schools do not have the mix right from such a theoretical point of view. Whilst teachers may identify weaknesses in the current system, they seem to be unaware of their own capability or responsibility to affect a remedy, and thus be part of the professional development continuum. If such awareness is absent, then it is unlikely that teachers have the type of reflective disposition where they are developing their practice on an ongoing basis and as part of every school day. The situation appears little different to that argument of Fullan that professional development 'is still too divorced from the life of organisations, not yet "organically" connected to everyday work' (Fullan 1994, p.6).